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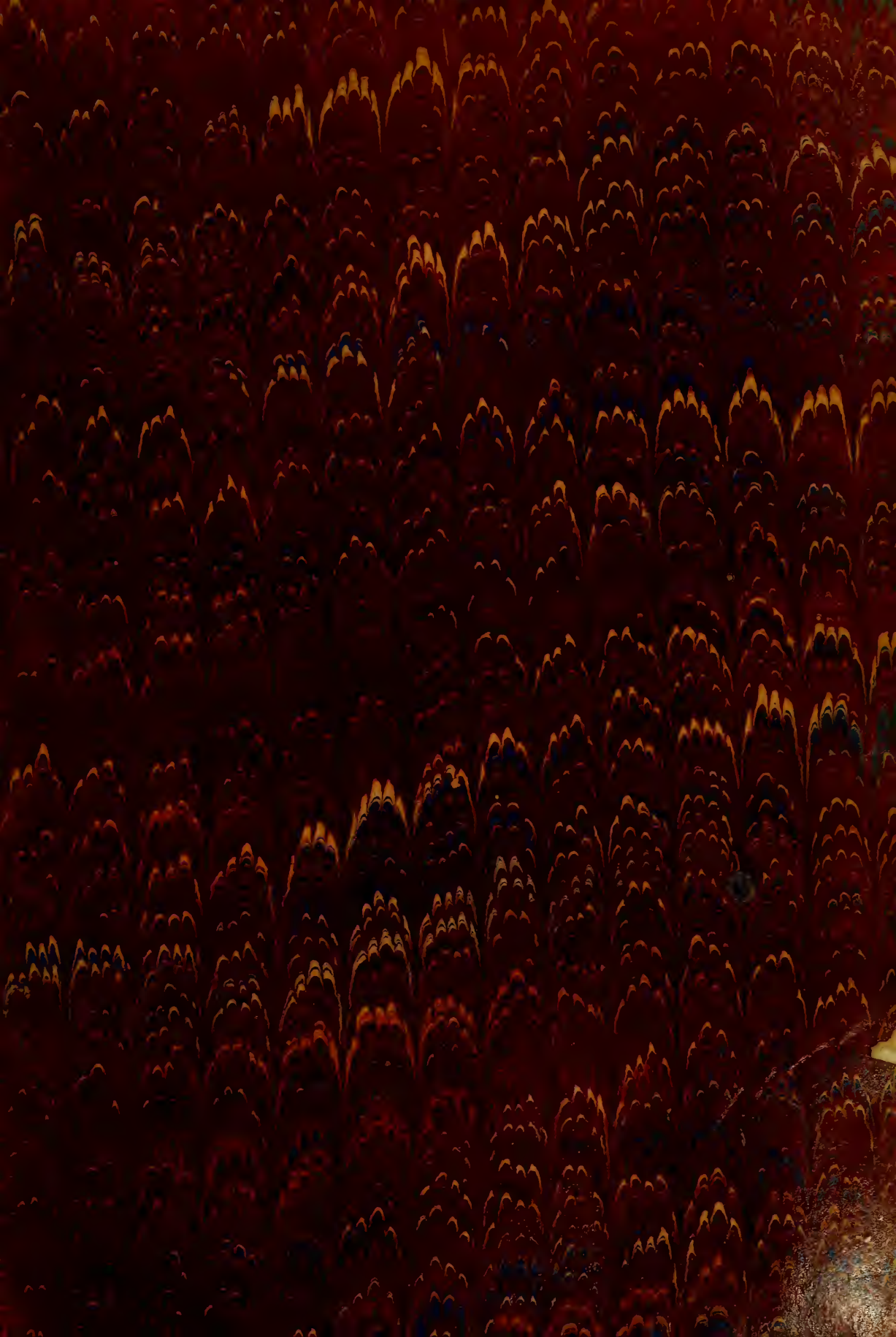

PERIODICAL DEPARTMENT

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CAMERA CRAFT

Some New Ideas as to Exposure and Development

The Point of View of the Pictorial Photographer

The Pictorial Treatment of Landscapes

Chemistry for Photographers, Etc., Etc.

The Usual Departments

San Francisco, California

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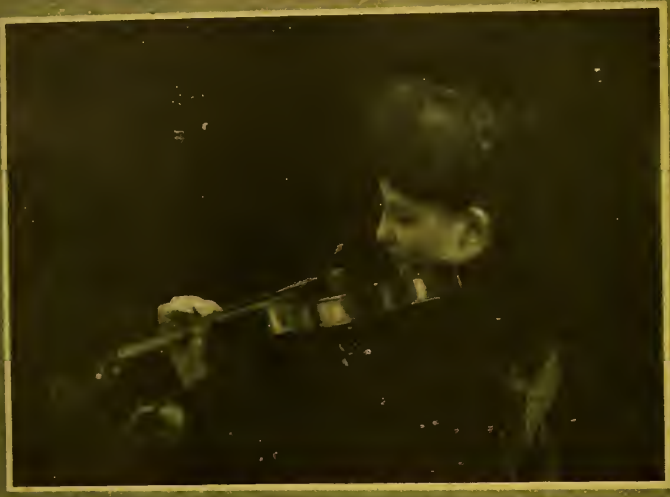

SWEET MEMORIES

By BELLE JOHNSON

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CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

VOL. XIII. SAN FRANCISCO, CALIFORNIA, JULY, 1906. NO. 1

Some New Ideas as to Exposures and Development

16700

By WALTER ZIMMERMAN

Beginning with the successful result of the theory that like development produces like results in the making of negatives, a theory upon which the writer has worked for some years and which has been put into practice by the tank developing machines, there are many things which are new to the photographer who still adheres to the old methods. It is useless to enlarge upon the uniformity of tank development except to say that special attention to each individual negative is usually labor wasted.

The man who wants the same class of negatives every time, has only to get the right developer, one to suit his plate or film, and then find the time of development for either, as the case may be, and save his time for other things while the developer is producing better results than if the negatives were being handled and watched.

There is, however, a long step beyond all of this. The photographer, amateur or professional, may obtain any effect that he may desire from practically any one kind of photographic surface by thoroughly grasping the higher principles of exposure and development. This may seem to imply a contradiction to the former theory; on the contrary, by true development each operator obtains or may obtain just what suits his particular purpose and each will obtain individual results by his individuality of method as manifested in exposure, strength of developer and duration of development. This then brings us to the newer theory concerning which I am now writing.

In negative making let us observe first, what different effects would be wanted by different workers or by one photographer for different purposes. For instance: by A, a very thin negative full of detail for "soft," "low-tone" printing. By B, a negative giving strong effects and printing great contrasts in lights and shadows. By C, and by the great majority, a negative with good detail and with sufficient variety as to light and shadows. By D, a negative in three tones, light, dark and middle, with elimination of detail. We will say that A works for low tones for exhibition purposes and is strictly non-commercial. B is an amateur whose ideas of beauty in photography is the strength of the negative and the contrast in the print. C is a commercial

photographer or an all-round amateur who does not reach after impressionism. D is an exhibition photographer, an impressionist at the other end of the scale from A and may be A himself working on totally different lines as is frequently shown in a collection of one man's work producing both "low-tones" and "poster" effects.

Many readers will say that but one result can be obtained with one particular plate and one particular developer. The man who so believes may want to read this article; the man who can successfully produce the four effects from one plate and one developer may not. The former will probably say that for four kinds of results he must use four kinds of plates and four kinds of developers. He shows his advancement by being able to obtain these varied results by any means whatever; but he will show still greater advancement by being able to obtain all with a single set of tools instead of four. The "easy" way to get the four effects is thus: For A's negatives, a fast plate usually, instantaneous orthochromatic, over-exposure and weak developer, such as dilute metol. For B's negatives, a slow plate, just sufficiently exposed, and strongly developed. For C's negatives, a fast or medium fast plate with full, not over, exposure and medium development with strong metol-hydroquinone or pyro. For D's negatives, a slow plate decidedly underexposed and greatly over-developed, such as with hydroquinone. It will be something, at least, for many of our readers to know how these very different results may be obtained, even if, as I say, by different sets of tools.

Now to work on the practice of our advanced theory; we have several kinds of plates giving, as is supposed, as many different effects in negative making. They are generally the 1st, extra rapid; 2nd, extra rapid orthochromatic; 3rd, medium fast; 4th, the slow; 5th, the very slow, and, 6th, the doulbe-coated fast plate. Illustrations of these six general classes of dry plates are:

1st. Cramer's Crown, Seed's 27, etc.
2nd. Cramer's Instantaneous Isochromatic, Seed's Rapid Orthochromatic.
3rd. Cramer's Anchor, Seed's 23.
4th. Cramer's Contrast.
5th. Seed's Process.
6th. Seed's Non-Halation and Standard Orthonon.

Can the theory be made to apply successfully to these six classes of plates? The relative exposures required to produce the usual average results with each are as follows: Nos. 1 and 2, one; No. 3, three; No. 4, six; No. 5, ten and No. 6, one and one-half. After learning the average exposure of each of these varieties we can proceed to work out our theory. The non-halation plates are placed last in the list for the reason that with strong development they give even greater contrasts than classes 4 and 5.

Let us suppose the No. 1 class as being the only kind of dry plates that

THE HATTER
By M. A. YAUCH

the worker has on hand and the stock solution of metol-hydroquinone is the one developer. The formula is as follows:

Water, nearly hot	4 quarts.
Metol	½ ounce.
Sulphite, dry	4 ounces.
Hydroquinone	½ ounce.
Carbonate, dry	6 ounces.

For ordinary use dilute with equal quantity of water. To produce A's effects; over-expose the plate, make developer one-fifth average (with stock solution, one part to ten of water), and give three or four times, instead of ten to twenty times, period of development with usual solution. Use no bromide. To produce B's effects: expose barely enough for shadows and use normal developer, full development. Use slight excess of bromide. To produce C's effects: give correct exposure for shadows and normal developer and development, normal use of bromide. Further modifications may be made in the use of intensifiers and reducers; ferricyanide-hypo intensified increasing while the persulphate-ammonia diminishes contrasts and any intensifier increasing contrasts. The whole theory as to development stands largely upon the axiom that strong development exaggerates contrasts and that weak development diminishes it.

Now to go to the other extreme and to obtain the four kinds of effects from the slow or very slow plate. Plate classes 4 and 5; the difficulty seems greater, and to many the thing will seem to be impossible, but we will proceed. First of all one must learn the requisite exposure of the slow plate emulsion to be used, in order to obtain full and complete detail in all shadows regardless of what may happen to the parts of the negative representing the high lights. There are very few who know how to give full exposure for slow plates. With this knowledge work in this way: For A's effects, give at least five times the exposure for complete detail in the shadows and developer with a developer diluted with twenty times the normal amount of water, no bromide. For the stock solution given herein use forty parts of water. Ordinarily, the slow plate develops much more rapidly than the last one. For A's negatives with twenty times diluted developer give ten times usual development with normal developer.

Right here should be given the caution that in using very dilute developer, the development should be by tank or with very deep trays filled to the brim in order to have a sufficient quality of the chemicals to produce the necessary results. For B's effects with a slow plate, give nearly full exposure to shadows and use normal developer. This kind of plate is ideal for B's results. Use a little bromide. For C's effects, that is, to obtain the usual "good" negative, slightly over-expose for shadows, make developer one-fifth usual strength and give five times usual period of development, omitting bromide. For D's effects, use the slow plate which is ideal for poster work. Expose for high lights and use normal developer, with bromide. Of course

the average or medium plate, class 3, is for the average work and to this class our theory is particularly applicable as obtaining the greater variety with greater ease. Exposing for shadows should be learned as with the slow plate.

For A's effects with class 3 plates, expose several times over that for shadows and weaken developer to one-tenth; under-develope and use no bromide. For B's effects: expose for shadows and use normal developer with some bromide. For C's effects: expose for shadows and use developer one-half normal and no bromide. For D's effects: expose for high lights, use normal developer with bromide and full development.

The things which the writer, as well as the reader has to contend with in learning the means of working on this interesting theory are, the lack of exact knowledge on the part of far more than nine-tenths of the bulb--squeezers and button pushers. Please, reader, do not feel offended, as this cannot possibly mean you, as to two or three important points referred to, for instance: "normal development," "exposure for shadows," and the correct use of bromide of potash, so that a brief reminder on these points will be useful. Normal development means such development of a properly exposed plate as will give correct definition in the lights and the darker parts of the resulting print. Exposing for shadows means disregarding the effects of the strong lights and exposing for the poorly lighted or darkly colored parts of the view or subject. The correct use of bromide is that which will avoid the darkening of the unexposed film by the chemicals.

In writing technical articles of this kind, one need lay aside personal ideas as to his individual methods and treats only of the general idea of getting every thing in the negative. An article of this kind is meant to show what an average worker would do in order to produce a given effect, nevertheless the four general effects here described will cover fairly well those sought for and obtained by the photographic workers of all schools and classes; for instance, A, illustrates the "low-tone" impressionist; B, the very new amateur; C, the average "good" photographer and D, the "broad" impressionist.

In order to obtain good results from the working out of this theory the photographer should ignore a third theory; that of factoral development. It is a theory that will not work in all-round practice. The factoral theory is, this: multiply the time of the appearing of the image by the factoral ratio of the developer. This theory answers very well with a normally exposed plate but it is the most fallacious when applied either to the over-exposed or under-exposed plate. Let readers who like to experiment try for themselves, follow instructions and observe results. The treatment for the best negative from an underexposed plate is prolonged development with rather weak developer, the tray and plate being, of course, covered to exclude even red light, and the tray rocked occasionally. The best results from an over-exposed plate are obtained by considerable over-developing and afterwards reducing to the proper printing density. Hundreds of over-exposed negatives are thrown away by failure to know or act upon this simple rule which is in flat contradiction of that of factoral development.

Laying aside the subject of producing varied effects from one form of dry plate and with one developer, there can be great variety in the effect of the photographic print according to the printing paper employed. For illustration: To print for softness and full detail, use a printing out or toning paper; for strong contrasts, use regular Velox; for soft effects, use bromide paper, and for richness of tone, as well as fair detail, use platinum paper. While these facts are interesting and useful, they are also well known to the advanced amateur or professional.

Let us now continue the illustration of our theory by showing how varied effects can be obtained from any one printing medium and with any one reducing agent or developer. The quick thinking reader will probably have already foreseen part of that which may be said on the subject, as the result of the description of the methods for working dry plates just given. Taking the printing mediums in the order in which I have named them, the printing out or toning paper has the least possible elasticity in the methods of working it. Some small modification can be made, even here, for the contrast may be increased by over-printing and then using toning and fixing baths made to "cut" the print, or else by having the toning and fixing considerably prolonged in action. The "Regular" Velox is next in its resistance to variety in printing effects but a considerable overexposure and an inversely weakened developer with omission of bromide will produce flatness or softness with detail while the usual exposure and development tends to strong contrasts with this paper. The several grades, however, give a wide variety of results. Bromide paper is very much more like the dry plate in producing varied effects from the same negative in contact work, the rules briefly being as follows: To produce a soft detailed print from a dense, harsh negative, the worker should know, to begin with, that the proper or normal printing distance for contract work with bromide paper is five or six feet from the printing light. To produce softness and detail from a harsh negative, hold the printing frame one foot from the printing light and give double normal exposure using weak developer without bromide. Suppose that normal exposure five feet distance were twenty-five seconds, normal exposure at one foot would be one second, double exposure two seconds. The experiment is most interesting.

To produce contrast, print from a weak negative using bromide paper, supposedly a difficult thing to do, one may cut down the light to say one twenty-fifth or better, make the exposure at five times the normal distance; that will be twenty-five feet and the normal exposure will be twenty-five times that at five feet, in order to obtain the same depth of printing. Underexposure, say fifteen times instead of twenty-five times that at five feet, and use strong developer with some excess of bromide.

To produce alternatly, soft and hard results from the same negative, follow first the rules for the overexposure at one foot and then those for the underexposure at twenty-five feet, bearing in mind that the proportionate normal exposure at the two distances is as one to six hundred and twenty-five or as one second for one distance and ten minutes and a quarter for the

other. The reader may know all of this but a reminder may save him good printing paper.

Singularly enough, platinum paper is capable of greatly increased or diminished contrast but this discovery was fully treated in my article on the subject which appeared in this magazine two or three years ago. Those who have read it will recall that to obtain great contrast the paper was to be over printed until the image should be reversed, development being by cold water only. For contrast and detail, print until the paper is almost uniformly darkened prior to reversal and develop with hot water. For softness from harsh negatives, print nearly to normal and use saturated developer, nearly boiling. I give this repetition very briefly for the reason that former issues (I won't say back number, for Camera Craft never is a "back number"), are unobtainable, having been destroyed in the great San Francisco fire. It is at the urgent request for "copy" on the part of my good friend the Editor, who has had his full share in the heavy losses from the fire, that I have very hastily prepared this treatise on a subject which ought to be a very interesting one.

SUNRISE ON A MISTY MORN By W. H. PORTERFIELD

Decorative Art

Decorative Art is what may be used in a certain position with propriety; that which is seemly, becoming and fitting. That such work should naturally be pleasing and attractive to the eye follows almost as a matter of course; but this we see was not the fundamental idea, and no matter how charming a thing may be in itself, if it be not fitted to its position, it is not truly decorative.—F. EDWARD HULME.

SUMMER
By M. A. YAUCH

TRIED BY FIRE
By PAUL OESTING

The Point of View of the Pictorial Photographer

By W. H. Porterfield

We are rather apt to think of the process of smearing colored unguents upon canvas with a bunch of bristles on the end of a stick as being the Alpha and Omega of Pictorial Art. Anyone who carries on this process, is, per se, an artist and conversely; an artist, to be really worthy of the name, must, it seems, produce his results in this manner and preferably, must use oil as a vehicle if full recognition should be his. Even the water-colorist or the etcher is not considered as being in the same class, but a grudging approval is accorded his efforts. It is curious that this should be the case for if one really considers the question, there is no reason why the aforesaid bunch of bristles immersed in a mixture of oil and pigment should be necessary to the production of a work of art. It is much as if we should say that one should not be called a musician unless he perform upon the violin, and preferably upon strings prepared from the interior arrangements of a peculiar variety of cat; for surely art, in its really big sense, is a thing far and beyond all questions of media. For that matter, it is also obviously above the question of mere skill, for otherwise where shall we place the mechanical draughtsman or the gentleman who engraves the entire New Testament upon the back of a ten-cent piece.

Probably, then, like Boston, art is a state of mind, and whoever possesses this mental state, plus the ability to present his thoughts in some form or other, is an artist. Certainly he must "make good." We can afford to disregard the "mute, inglorius Milton." But suppose a man of artistic taste and training take up, let us say, the camera as a means of personal expression. His results will be naturally more or less successful, depending upon what he has to say and how well he may know how to say it. And as he gains greater control of his medium he will say bigger things and say them better. And the world will see his pictures and some of the elect few will understand and judge them wisely, but the attitude of the average intelligent person will be: "Why, they're really very nice, you know. It's hard to realize that they're only photographs."

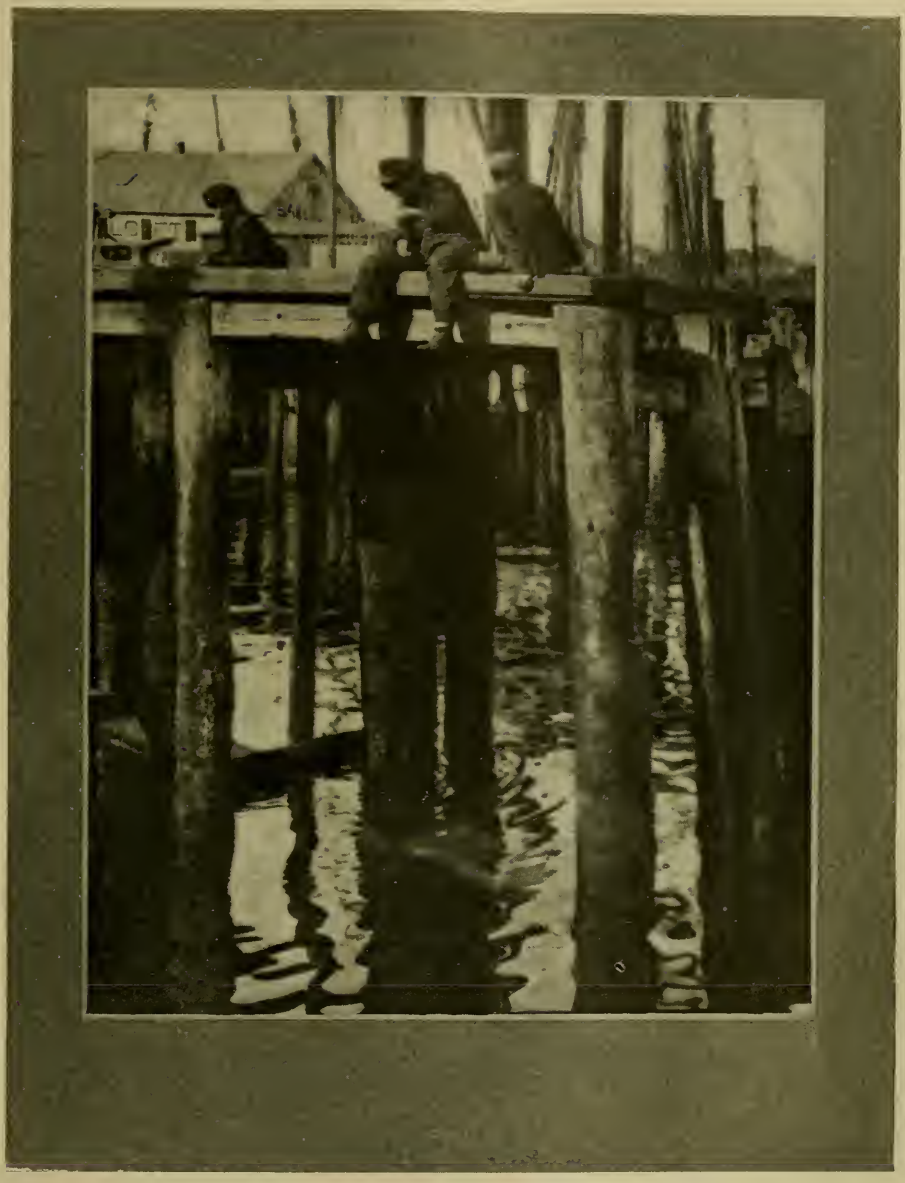
This probably is the more or less conscious attitude of mind of some of those who make up no small proportion of my enlightened readers. It is either perfectly well-founded and correct or absolutely unjust. Let us consider the question and in order to do so intelligently, let us see what is meant by the so-called "new movement" in photography.

The efforts of the great men who first worked out the problems of photography were naturally directed to the perfecting of the mechanical side of the wonderful discovery. Process after process was devised, tested, and then thrown aside as being incapable of giving the desiderata of correct drawing, perspective and clean cut detail. It was not until a comparatively recent date that this technical perfection, or something closely approaching it, was

reached. Thirty years ago the enterprising photographer who ventured outdoors with his sixty or seventy pound camera, and his light tight and air tight portable dark room in which each plate had to be first prepared and then developed, had every reason for self congratulation if his negative approached at all closely to his goal of technical perfection. In fact, he counted himself lucky if he got any results at all. He had no time to consider the purely artistic qualities that would make his results a picture. Even with the advent of the dry-plate and the resultant simplification with its reduction by half of his paraphernalia and processes ,it was small wonder that the old mechanical idea survived. The photographer learnt his trade as he might have learned that of brick-laying and the idea that art principles should have any bearing upon his work would have been as absurd to him as that he should endeavor to conduct it according to the principles of systematic Theology. In fact, and there are people of whom this is true today, the suggestion that it would do no harm to know something of the fundamental rules of art was to some of these worthy workers like the proverbial red rag to the bull. It was only a few years ago that one estimable gentleman resigned from the Photographic Society of Philadelphia because he saw upon its table one day a copy of the "International Studio." The class of work that would be turned out by such as these may well be imagined but the effect of such work and such "art-phobia" as effecting the intelligent picture lover's mind in regard to photography in general is hard to fully realize.

It would seem then, that in the earlier days of photography, technical difficulties stood in the way of the development of pictorial ideas. On the other hand though, the very abolition of these difficulties brought about a condition which has been almost as great a hindrance. The introduction of the Kodak, the "you push the button and we'll do the rest" idea, brought a species of photograph within the reach of everyone. An appalling number of "snap-shooters" were turned loose upon a helpless world. Photography became a common-place; an idle fad.

Throughout all this period, nevertheless, of perhaps twenty-five years from the introduction of the dry-plate down to the present, a new influence has been slowly making itself felt. The field of photography has been gradually invaded by the earnest workers who saw in this new and wonderful invention the medium through which they might express to others the message of beauty, of strength, or mystery which Nature delivered to them. More and more people of artistic instincts and training took up photography as a means of expression and gradually their good work has had its effect in the improvement of popular taste and in the recognition which has been secured from artists and art institutes the world over. From Philadelphia to San Francisco, from Glasgow to Buda Pesth, from St. Petersburg to Turin, from London, Paris and Hamburg to Sydney and Melbourne, photographic work of the new school has been invited and hung in art galleries almost in competition with priceless paintings. At this moment, in our own Academy of the Fine Arts, is hung that which I do not hesitate to say is the finest collection of photographs that has ever been brought together. This exhibition,



ON THE DOCK
By WM. H. PHILLIPS

arranged by the Photo-Secession, was brought here at the request of the Academy, which thus once more places itself on record as recognizing the great art value of this work. I will have more to say concerning this exhibition a little later.

But we are still far from a general recognition of what may be laid down as a fundamental doctrine of our creed: that a photograph should be judged by precisely the same standards as any other monochromatic work of artistic intention. It is good or bad in composition, in tonality, in feeling or in quality. It is good or bad in drawing, for a photograph may be most atrociously drawn; or even in color, as the word is employed among painters as applying to black and white values. Like a painting, and we claim no monopoly, it may be unspeakable atrocity to which no one of cultivated taste would give house room; or it may be a work of absolute genius, saturated with the very soul of its maker. And yet in either case it is "only a photograph."

Probably if one were to sift to the bottom the prejudice that makes possible this sweeping statement he would find that it has been largely caused as I have already suggested by the attitude of the photographers of the old school towards anything that smacked of art. Further than this is the widespread belief among laymen that the whole thing is as cold and mechanical as a hurdy-gurdy; that personality, impressionism; and all great art is in some degree impressionistic; may not be infused into the products of a series of mechanical processes.

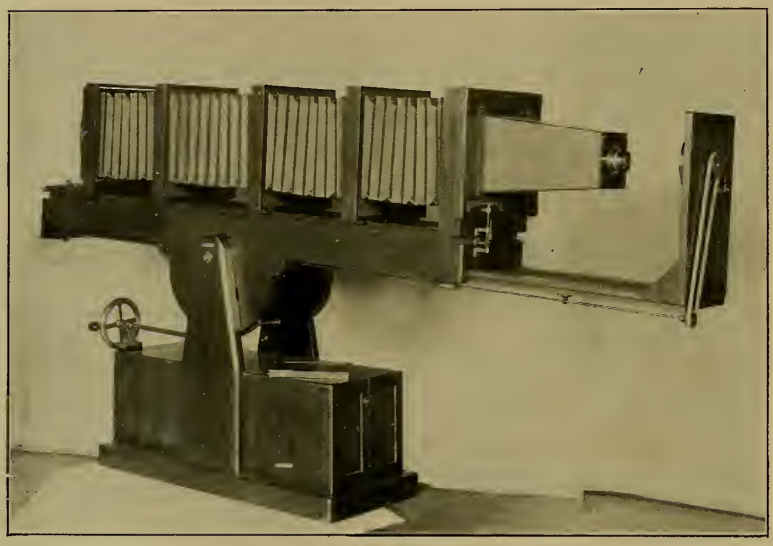
If this be true there is an end to all our aspirations; better let us paint if we can, however so badly, or forever after hold our peace. But if a photograph may, never so rarely, exhibit the personality of its maker; take its place as an individual artistic achievement; if it be possible for the trained eye to distinguish between the work of A, B, C and D, as between a Sargent and a Whistler, a Rubens and a Velasquez, then our claim is established and a complete recognition is only a question of time. And that this individuality exists in the work of the best photographers of today is demonstrated at the judging of every first-class exhibition. A good jury will almost invariably recognize at first glance a print by a worker of repute and will never confuse the work of A with that of B, or C with D. No better opportunity for the study of this individuality could be found than that afforded by the exhibition at the Academy to which I have already referred. We may begin with the broadly marked line of demarcation between the various national schools. Nothing could be more marked than the contrasts furnished by the great gum prints of the Viennese trifolium: Kuehn, Henneberg and Watzek; with the group of French work which hangs opposite them. The first are big, not merely in actual size but in conception, in subject and in composition; all typical of the best in modern Austrian-German art. The French prints which are produced in precisely the same medium, gum-bichromate; are dainty, graceful and charming. They are just as typical, perhaps as fine, but totally different. Just as strong contrasts are shown by the English and American prints and, though not quite so obviously, between the work of

individuals even of the same national school. I commend this show to the earnest attention of all who can visit it. You will have to look a long way before finding anything better among paintings. Study it and compare Steichen with White, Mrs. Kasebir with Dyer or Keiley, or Demachy with Puyo or Le Begue. I think that you will agree with me that these prints show as marked differentiation as you will find in a similar exhibition of paintings. And this is not by any means a question merely of subject; in fact, it has been frequently shown that three or four of the advanced workers of today may attack the same subject under the same conditions and that the resultant prints, while all full of the quality of resemblance to the subject, will be quite unlike each other and each will be easily distinguishable as the work of its particular author. This experiment has been tried many times and always with the same result. And this result will occur even with the contestants limit themselves to identical processes and those of the simplest and most photographic kind. But, in the hands of the advanced worker there are other means which are far from being simple or photographic in the ordinary sense but which enormously increase his ability to put into his work his individual touch. One of these, the gum-bichromate process, is one that was discarded forty years ago in the search for something which should possess the merit of absolute scientific accuracy. It was certainly not for this quality that gum was resurrected by the pictorialists, but for its elasticity, giving as it does more freedom to the worker in the direction of the simplification and centralization of his prints than is afforded by any other photographic method. But there are also new processes and devices without number, the tendency of all of them being to increase the possibility of differentiation between your work and mine; of individuality. After the composition of the subject has been decided upon, in each successive step from the selection of the lens which will best produce the effect desired, to the careful making of just the proper print, a multitude of alternative tools and processes are presented to the photographer. They are his tools as words are the tools of the writer and it rests with him whether he shall use them well or badly. Surely his results are entitled to be judged for what they are; neither patronized nor scorned because they are "only photographs."

A Special Camera

In protographing fossils the United States Geological Survey employs what is known as "The Williams Process." This method was worked out by Professor Henry S. Williams and Norman W. Carkhuff, and consists in an elimination of the color of the fossil by a process of sublimination. Such subjects cannot be photographed for scientific purposes in a haphazard manner. There are certain characteristics that must always be orientated in relatively the same position and illuminated in the same way, in order to produce results of any practical value to the scientist. A part of these fossils being photographed same size, while others are much enlarged; great accuracy

is required in this particular. Many of these fossils being exceedingly small and delicate, it is obvious that to do the work economically special apparatus is required. The Folmer & Schwing Company, of Rochester, New York, have just completed a special piece of photographic apparatus designed and built by them for the United States Geological Survey for photographing fossils, or other similar objects. Could a comparison be made between the first piece of apparatus used by the original experimenters with this new apparatus the remarkable evolution is scientific camera building, as practiced at the present time by the Folmer & Schwing Company, would cause unbounded admiration.



This special camera is mounted on a tilting base, so arranged that either end may be raised or lowered to give any desired inclination, in order that the proper lighting of the subject may be secured. The operator can make any desired adjustment of camera or subject while consulting the focusing screen and without leaving his natural position. He can move the subject from the lens; or can raise, lower or revolve the support on which the subject is placed. He can move the camera backward or forward on the tilting stand; raise, lower or shift the camera front; revolve the back from a horizontal, through any intermediate, to a vertical position to any intermediate point. Any adjustment necessary, in order to secure the proper lighting, can be made by the operator without leaving his position, and all made by mechanical devices. The base of the stand contains two cabinets for storing lenses or small parts. The focal capacity of the camera, including cone extension, is seven and a half feet. Length of stand top, with subject support and camera extended, eleven feet. Size of plate 6½x8½ with kits to 3¼x4¼.

The Pictorial Treatment of Landscapes

By C. Yarnall Abbott

It is safe to say that no other subject appeals to the photographer, especially the amateur, like that of landscape. Immediately after getting the first camera, the enthusiast hies himself to the country and proceeds forthwith to carve out of the panorama such parts of it as may satisfy his fancy, and suffice it to say that nearly everything looks good to the beginner. Nature as viewed through a lens with all her variety of colors is certainly inviting, but do not allow the eye to be deceived by color; nothing is more deceptive. Remember at all times that color has nothing to do with the finished picture. The all great and important thing in landscape photography is "composition," or if you prefer, "selection of subject."

This question has been talked over and written about until it has undoubtedly grown monotonous, but until some of its secrets have been mastered there is absolutely no future for the aspiring landscapist. He must study the relation of masses, one to the other; prospective, both linear and atmospheric; all these including texture, lighting, detail and the like are only parts of composition. The knowledge of composition may be acquired in various ways, but practice is probably the best teacher; observation the next. Study paintings in the art galleries, and if possible submit your work to an artist for criticism, paying strict attention to his remarks and let the critic, who ever he is, understand that you are after fact and not flattery. Many of the photographic magazines conduct monthly competitions and much may be learned by carefully reading these criticisms, but as heretofore mentioned the best teacher is experience.

It will be necessary here to briefly touch on the subject of camera, plates and other requisits. The best camera for landscape work is one with a double or triple extension bellow, a rapid convertible or rectillinear lens, using plates 4x5 or not over 5x7 inches in size. Many innovations have taken place in the past few years in ideas regarding the landscape camera. One result, and I think the principal one, is that small cameras are used now almost universally by the best workers and I need only point to the wonderful results which are accomplished to prove that the latter-day pictoralist with his small camera and ordinary lens has given the world results which approach nearer the throne of art than anything ever produced since the discovery of photography. When working with a small camera, an enlarging apparatus is indispensible and it is in the process of enlarging that much of the artistic and pictorial result is obtained. There are many opportunities for the display of individuality in the various stages of the production of an enlargement; but that is a study by itself and would necessitate a special description which cannot be given here.

Regarding the lens, I realize that to place an ordinary rectillinear on the same plane with an anastigmat will bring down severe remarks from those who may possess these later jewel like instruments until lately regarded as absolutely essential to success. But the fact remains that for pictorial work

MOONRISE
By C. YARNALL ABBOTT

an ordinary lens of moderate price is fully as good and by many regarded as superior to the high priced anastigmats which, by the way, were originally intended only for the use of line engravers where microscopic detail is a positive necessity. That painful, wire like detail, so prevalent in the photograph of ten years ago is conspiciously absent in the pictorial work of the present day, simply because the photographer has learned to see atmosphere, one of the most valuable assets of the painter, and it is here that the lens plays its important part.

Advocates of the high class lens will say that this quality may be acquired in the process of enlarging by simply throwing the image out of focus; that is true only to a certain extent for is it not apparent when this method is restored to that the whole image is diffused, foreground and distance left; consequently the picture lacks perspective. The idea of making the original negative "sharp all over" and then depending on subsequent operations for the necessary atmosphere effects is all wrong and no doubt responsible to a great degree for the term "Fuzzytype," which is well merited. Make your original as you wish the finished and enlarged print to be; if the subject permits a resonable amount of foreground,—that nearest you should be fairly sharp and as distance increases, detail should diminish. This is accomplished usually by using the lens at full aperture, stopping down only when some particular object or effect is gained by so doing.

Regarding plates, there is little to say. There are many brands on the market and they are all good. However, I should advise using an orthochromatic of medium speed and would emphasize the advice; stick to one brand of plates. The same may be said of developers and the chemicals which enter into their composition.

The selection of a printing medium may be narrowed down to three processes, namely: carbon, gum-bichromate and platinum; the first two preferred. Gas light paper is too rapid to permit of much control and the question of its permanancy should be sufficient to deter the serious worker. As the percentage of carbon workers is decidedly on the increase among the salon exhibitors it may be taken as an assurance that that much neglected medium will in a short time stand preeminent as the process best adapted to pictorial photography.

As a closing remark I beg to quote a few words from the lips of a famous instructor in athletics who was delivering a lecture on football to a team in one of the great colleges in the East, and which, I think, applies as well to any thing as it does to football. Endeavoring to impress upon the minds of the players the necessity of constant application, he said: "Gentlemen, you must talk football, you must think football, you must read football and you must dream football." This is true of photography.

The great artist, whether he be painter or sculptor, ought to be a great designer, and know how to reduce in proportion and form the harmony of all the different parts of an object, be it in form, action or expression—F. Goupil.

THE DUET
By MRS. W. W. PEARCE

Sepia Artisti Platinum

By Mrs. W. W. Pearce

I recently had sent me three dozen 8x10 sheets of Sepia Artisti Platinum paper made by the Platinum Manufacturing Company, of Denver. I had seen it advertised in this, my favorite photographic magazine, and had long desired to give it a trial. The opportunity came in my being awarded a prize for one of my pictures, the amount to be taken out in photographic material; and I want to tell of my pleasure at results secured and of the discoveries that I made in using the paper.

In the first place, when the paper arrived I was in violent haste to finish up some exhibition pictures that had to be dispatched at once. The new paper was particularly suited to the work in hand as it was just the size wanted but I had at hand none of the developing salts put out by the manufacturers. All that was available was some old, used developer for black platinums. It was a case of using "any old thing," and this was pressed into service; not only this disregard of fairness to the new paper but I heated up the bath as well. The resultant prints were surprisingly fine; such beautiful golden sepia tones such as one sometimes secures with other brands after using an extra amount of sepia solution. I was simply surprised at the fine results. And I did not follow directions in the making up of the clearing bath. Having no hydrochloric acid at hand I made up the clearing bath with muriatic acid instead.

But my discoveries; the first was that I had to rush the sepia prints through the acid baths, giving about five minutes to each, or I lost the beautiful golden glow which I so much desired to retain. This might not have been the case had I followed the maker's instructions and used the hydrochloric acid advised for the clearing baths. My second discovery was that I could save all my over-exposed prints, no matter how badly over-printed, by simply allowing them to remain in my muriatic acid clearing bath for a half hour or longer. Of course I lost my beautiful golden sepia color but the prints were far from being bad looking platinums. They suffered only by comparison with the correctly exposed ones and for some subjects would have withstood even that strong test as to their quality. The last discovery was that this bleaching or reducing effect could be best secured while the prints were wet. Some over-exposed prints had been allowed to dry and were treated to the acid bath the next day. These required about twenty-four hours in which to become reduced to good prints.

I do not wish to recommend such total disregards of the maker's instructions. I have described my experience with this paper only because I feel that the results of actual experiments are valuable to other workers. I am sending for a supply of the maker's developing salts and shall employ the acid recommended by them when next using the paper. With me it was a case of using what I had at hand and to say that I was agreeably surprised at the fine results secured is stating the case very mildly.

Chemistry for Photographers

By E. A. Turner

Photography, particularly its chemical aspect, is considered by many to be a very mysterious process. The simple operation of impressing a picture on a sensitive surface seems at first very difficult to explain, and when it is understood that the picture is often impressed upon the plate in the thousandth part of a second, and the effect of the exposure on the plate is entirely invisible until the developer is applied, the mystery increases. To the beginner, it seems almost uncanny, the gradual development of the picture on the creamy white surface of the plate, produced by simply flowing over it a colorless solution.

Though photographic chemistry is one of the least understood branches of scientific study and though many of the phenomena of photography are not yet fully understood by the most expert photographic chemists; most of the operations of photography can be explained in a way that will make success much easier and more certain than with the usual hit-or-miss methods that are often employed. But before we can go ahead and discuss the actual operations of photography, it will doubtless be well to describe a few of the principles that underlie all photographic as well as other, chemical work.

First; we must understand something about the composition and constitution of the chemicals used, and how they are made. All chemicals may be divided into two classes: chemical elements and chemical compounds. There are now only seventy-eight known chemical elements or elementary chemical substances, and of these seventy-eight, all of the thousands of chemicals, and in fact all substances and things, are made by chemical combination. Just as the architect constructs building vastly different in style and purpose from the same materials; brick, stone, mortar, wood and steel, so the various chemical compounds used in photography are built up from the chemical elements. The principal difference is, that in the formation of chemical compounds from the elements each of the elements loses all its individual properties and peculiarities when it enters into the compound. The compound is absolutely different from any of the elements that enter into its composition.

Take sulphite of soda for example. "Sulphite" is a chemical compound of the three elements, sodium, sulphur and oxygen. Sodium is a peculiar metal, much softer than lead, and has a strong attraction for water. It must be kept either in cans which are sealed up, or else under the surface of paraffin oil or kerosene, where no air or moisture can reach it. When heated, it takes fire and burns with a yellow flame. Sulphur we are all familiar with. either as roll sulphur (brimstone), or as flowers of sulphur. These are only two different forms of the same substance. Oxygen makes up about one-fifth of the volume of ordinary air, and is a colorless gas. The sulphite of soda formed by the chemical combination of these three elements is as absolutely different from all of them as could well be possible. Sodium and sulphur are both combustible, but sulphite of soda has not the slightest tendency to take fire, no matter how much it may be heated. Sulphur is yellow,

BLOSSOMS
By MRS. W. W. PEARCE

but sulphite of soda is pure white without the slightest trace of yellowness, if pure. Sodium is soft, like wax, but the particles of sulphite of soda are hard and brittle. Sodium and sulphur are opaque, that is, they obstruct the passage of light, but a solid piece of pure sodium sulphite is as clear and transparent as the clearest glass. This property is not noticed very clearly in the crystal sulphite on the market on account of the air imprisoned in the crystals and the striated structure, but it is most beautifully demonstrated under the microscope with small granules of annydrous sulphite. And lastly, what difference could be greater than that between oxygen, a colorless, odorless gas composing one-fifth of the air we breathe, and the hard, solid particles of sulphite of soda.

These changes of chemical combination may seem most mysterious, but what is mystery except unfamiliarity. When the magician changes a glass of ink into water with goldfish swimming in it, we are all very much mystified. But when it is explained how the goldfish and water were there all the time and the appearance of ink as only caused by a piece of black silk surrounding the inside of the glass, the mystery at once vanishes. In reality, there are hundreds of things in daily life that are quite as mysterious as the wonders of chemistry but we do not notice them because we have become so familiar with seeing them every day. Take the waves of the ocean for example. What makes them? Why do they travel just about so far apart and at just about a certain speed. Why doesn't one wave travel a little faster and "catch up" with the one before? Then think of heat and fire. Why does the important end of a match become warm when subjected to friction? And why does it take fire when it becomes warm enough? What is fire, anyway? Perhaps these simple illustrations will serve to show that mystery is principally a question of unfamiliarity. There is mystery everywhere and in everything, only we do not stop to think about it.

Now, to forget that there is any such thing as mystery, let us investigate and devote a little thought to the process of photography. If the digression may be pardoned, we will for the moment leave the subject of chemistry aside and consider the mechanical or "optical" questions involved in the taking of a picture. First, consider some particular object to be photographed. Take a dwelling house for example. As we look at the building we can see all the different portions (details) of different forms and different degrees of color or brilliancy of lighting. Perhaps there is a piece of white paper on the lawn in the direct sunlight. This is the brightest object in the "picture." Then comes the blue sky and then the portions of the house of medium grade or degree of color, on which the sunlight falls. From these we can follow down through various kinds of foliage into the deep shadows where there is represented the shadow-detail that sends out or reflects the least light of any portion of the picture. All these objects, of different color and degree of illumination, compose the picture we desire to photograph, and in considering the taking of a picture we may consider any subject as being a similar collection of various high-lights, half tones and shadows.

The next feature that we consider in the taking of the picture, is the

securing of this collection of high-lights, half tones and shadows in a reduced scale, on a flat surface of convenient size; the surface of the photographic dry plate. To accomplish this is the purpose of any ordinary photographic camera. The simplest one is the pin hole camera, and we will, therefore, first turn our attention to the image formed with the pin hole box. A simple subject, a tree, for example, is to be photographed. Light from each portion of the tree, each leaf and each portion of bark, "shines" or is reflected in a straight line right through the pin hole and on to the surface of the plate in the back of the inside of the box. As the light from the top of the tree travels downward and that from the bottom upward, the two crossing at the pin hole, the image will be wrong side up, the top of the tree being at the bottom of the plate and vice versa. Of course the "image" will be formed on either ground glass or dry plate, whichever is in position at the back of the camera. All the other portions of the tree are projected in the same way, through the pin hole to the plate and all the details so conveyed, together, make up the picture or image on the ground glass. The image is, of course, reversed right and left as well as vertically.

This is the working of the pin hole camera. Every ordinary camera carries, instead of the pin hole, a lens. The purpose of the lens is simply to enable more light to pass to the plate, and thus to make the image stronger and reduce the time of exposure necessary. The exposure required with a pin hole camera is always comparatively long. Even with the fastest plate and under the brightest conditions of sunlight, the exposure will never be less than several seconds, and this would hardly suffice for snap-shot exposures. We can increase the size of the pin hole and secure a stronger image and shorten exposure, but only at the expense of sharpness of definition. The lens allows us to increase the size of the opening and still to secure the desired sharpness. With the pinhole the light coming from any point on the object is increased to a circle on the plate's surface a little larger than the hole. The lens, however, refracts or bends the outer rays of light so that they meet again at the focal point on the ground glass. Each point is thus made sharp on the ground glass and the whole picture is said to have a sharp definition, even with a large lens opening, and sharp pictures may be made with very short exposures. We have now considered the securing of the image on the ground glass, in the simplest way possible, and we will next take up the transferrence of this image to the dry plate or film.

The effect secured on the photo-sensitive surface when the exposure is made is produced by what is termed the chemical action of light. Everyone is familiar with some of the ordinary chemical light actions. The fading of color in carpets and wall papers is one of these actions. The carpet retains its original brilliancy where covered by a rug or desk, and the wall paper remains bright wherever a picture hangs to prevent the light from striking it. Then everyone has noticed how quickly the new bright lumber used by the carpenter in erecting a building, turns first brown and then greyish black when exposed to the rays of the summer sun. These are the cases of chemical light action usually noticed in everyday life and in chemistry

we have hundreds of others, most of them being more delicate than these. A mixture of the two glasses, hydrogen and chlorine, may easily be made in the dark or in very weak light, but when the mixture is exposed to sunlight or magnesium light, it instantly explodes. Still more delicate are the light actions on compounds of silver, especially the organic compounds. Three compounds of silver, the bromide, the chloride, and the iodide, darken readily when exposed to light, though they are not organic compounds. Almost any silver compound when in contact with organic matter will darken in this way, and the chloride, bromide and iodide are more sensitive when in contact with some organic matter, such as gelatine or collodion. An interesting illustration of this sensitiveness is noticed in the case of nitrate of silver. The nitrate occurs in clear white crystals and in this form it may be exposed to bright sunlight without the slightest change. But if a crystal of nitrate of silver comes in contact with the finger, a little of it dissolves off and sticks, and then being in contact with an organic substance it soon turns jet black when exposed to light. The most sensitive of all the silver compounds known is that of bromide of silver and gelatine, called gelatino-bromide of silver. This is the compound we aim to prepare, in an extremely sensitve state, when making an emulsion for coating the glass or celluloid in the manufacture of dry plates and films. It is so extremely sensitive to light that it enables the image to be impressed upon its surface in the hundredth part of a second, or less. The dry plate, then, which we place in the plane of the ground glass when making the exposure, receives the image upon a creamy yellow surface of this extremely sensitive gelatino-bromide. The amount of effect produced depends upon the intensity of the light and the duration of exposure. Half as strong a light will require twice as long an exposure to produce the same effect. As we wish to record on the plate the delicate detail in the deep shadows of the subject, we must give a sufficiently long exposure to enable the weak shadow-detail to impress itself. Hence the old rule, "expose for the shadows."

The effect produced being proportional to the amount of light, the strongest effect will be produced by the sky and white objects in the picture, and the weakest effect by the deepest shadow-detail, with all grades (or gradations) of half tone between. This effect of exposure, as is well known to every photographer, is quite invisible until it is brought out by the action of a developer. What we call a developer is a solution of various chemicals which has a strong tendency to reduce or change compounds of silver to metallic silver. The developer is not powerful enough to reduce the compound in the sensitive coating of a dry plate, unless assisted by the action of light. If, however, the coating has previously received an "exposure," the developer is able to reduce the different parts of the coating to the metal silver, but to different degrees, depending upon how much light exposure each particular part has received. Hence the development of the different gradations of the negative; corresponding to the infinite number of high lights, half tones and shadow-details.

The preparation of the sensitive coating is a problem that must be left to the manufacturer. It requires long and careful study of photographic

chemistry and a well-regulated plant to be able to produce dependable sensitive coatings that will properly reproduce high-lights, halftones and shadows, in their true values. A properly made dry plate will not only correctly reproduce the tone values with correct exposure but it will allow a considerable variation or latitude in the exposure without there being any appreciable difference in the print. Given a good dry plate, all this is taken care of, and the photographer has simply to give an exposure, correct within reasonable limits, and develop up the tones until there is a proper degree of difference between high-lights and shadows; or in other words, until the negative has proper contrast.

The contrast secured depends principally upon four considerations: The qualities of the sensitive coating on the plate; the contrast existing in the subject photographed, the composition of the developer, and the amount of development. The last item, amount of development, includes time of development and temperature and concentration of the solution employed.

A good plate being selected, its qualities are always the same, and the work of the photographer, after having arranged the composition of the picture, consists simply of exposing it to secure a proper impression of the various tone values on the plate and developing this impression to secure a proper degree of contrast in the resulting negative so that it will print well on the paper he employs in making his prints. In making the exposure we are, as usual, working between two extremes; overexposure and underexposure, If we underexpose, the shadow-detail will not be properly impressed on the plate and no amount of developing will bring it out. If we overexpose beyond the allowable limit, the highlights of the picture will become flattened; and sky, clouds and roof will be too near alike in tone. But this is not the usual result. Most cases of so-called overexposure are in reality the effect of underdevelopment. A negative that has had rather an abundant exposure becomes dark all over rather early in development and the photographer who works according to appearance takes it out of the solution too soon. The result is that it is underdeveloped and has not sufficient general contrast. By longer development it would have produced a good negative, but one that would be quite dense and a slow printer.

It is easy to see that a negative of a subject with strong contrasts will not require so much development as a negative of an average subject; for the contrast is already too great and requires to be reduced by shortening the development. Development is, then, to a slight extent, dependent on the subject. But as most subjects are of very much the same degree of contrast, this feature is not much considered. It does, however, have a great deal to do with the fact that one photographer is most successful with one kind of work, as landscapes, while another secures his best effects in pictures of the sea. It is to a large extent a question of getting acquainted with the exposure and development required to properly take care of the contrast of a particular kind of subject in the making of the negative.

(*To be continued*)

AN AUTUMN LANDSCAPE
PIN HOLE PHOTOGRAPH

By THOS. H. MORGAN

Art

Our lives in every direction, every occupation, are filled with the presence and influence of Art; and as every day of our lives, we are called upon to exercise a choice or to express an opinion bearing on the subject, does it not become a moral obligation to exercise a wide choice, to express a just opinion and since there is a good and bad, a true and false in Art, to learn to distinguish them?—LUCY CRANE.

Taste

It is characteristic of decorative art that it depends almost as much upon the critical as upon the creative faculty of the artist. More than any other art it depends upon taste; and by that test it stands or falls. It is taste that determines—what is it that it does not determine in decoration? It settles in the first place whether there should be decoration at all, how much of it, of what kind, where it shall be introduced, and how executed. It prescribes what is wanted, what is admissible, and what is becoming. Not one of these questions can be solved without reference to it. Every work of applied art is a problem, and the most important factor in its solution is taste.—LEWIS FOREMAN DAY.

The Relief Fund for California Photographers

Shortly after the fire a meeting of professional photographers was called as a preliminary and a little later another to consider the matter of assisting those of the craft who had lost their business and in many cases, their homes at the same time. Information had been received that various funds were being collected in the East and the prompt disposal of such assistance as was available became a matter of importance. A relief committee was appointed, consisting of the following well known local photographers: O. H. Boye, T. H. Wilton, Paul Lotz, I. W. Tabor, George Knight, O. V. Lange and Jacob Fowzer, Mr. Boye acting as chairman. The selection of this committee was so made that it included photographers following a varied line of work in order that there might be no danger of any deserving member of the craft being overlooked. The name of every possible loser by the earthquake or fire was listed and their address sought and listed. All were reached either by letter or personally by some member of the committee with the result that some forty former proprietors in San Francisco, San Jose and Santa Rosa have received material aid, and received it promptly, at a time it was most effective. Many others required only assistance to reach friends or new fields of activity, others required no cash and asked simply that a little material be placed at their disposal. Still others made no claim upon the resources of the committee and as these last formed the larger portion of the cases investigated, it speaks well for the independence and reliance on self that characterizes the photographers of the unfortunate sections.

While most of the funds so generously sent by outside bodies of photographers were clearly specified as being for the use of the former proprietors of destroyed studios and were so used, other subscriptions were placed solely at the discretion of the committee which was in that way enabled to practically render assistance to every case of needy and deserving photographer. The following list of funds and donations received is believed to be full and complete, but the work of handling matters has been so hampered by lack of time on the part of the committee, that it must be pardoned for any mistake. Mr. Boye also regrets that the correspondence has been so meagre that he is not able to fully credit all the amounts further than to name the persons through whom they were received:

May 31st,	C. P. Goertz Optical Works, through L. T. R. Holtz	$ 100.00
"	T. H. Wilton, San Francisco	5.00
"	O. H. Boye, San Francisco	5.00
"	J. D. Givens, San Francisco	5.00
June 8th,	Western Section, New York Photographers' Association, through Dudley Hoyt.	500.00
June 15th,	Additional, through Dudley Hoyt	338.25
June 20th,	General fund, Jos. Byron, Treas., through B. J. Falk	913.62

June 20th,	G. Cramer Dry Plate Co., 35 cases of plates	
June 20th,	Eastman Kodak Co., stock to amount of..	1,500.00
June 25th,	Willis & Clements, check through Hircsh & Kaiser	132.42
June 21st,	A. Grothwell, twenty Mogul trays.....	.....
June 24th,	General Fund Committee of Boston, through F. R. Barrows	500.00
June 25th,	George Butler, Salinas, Cal.....	5.00
July 1st,	General Fund Committtee, of Philadelphia, through Jos. Byron, New York.....	151.57
July 7th,	Additional, New York fund.....	5.00
July 7th,	Paul Lotz, San Francisco	4.50

Mr. Boye, in behalf of the committee and of those who have been so materially assisted, as well as for those who have not found it necessary to avail themselves of the generous aid placed at their disposal, wishes to express the most keen appreciation of the assistance rendered by those who have so generously come forward when relief was so sorely needed. That the fund contributed has been well placed is proven by the entire absence of dissatisfaction or lack of harmony. The thanks of the photographers who suffered by the recent calamity are most deep and sincere, not only for the material assistance, but for the kindly feeling which prompted its bestowal.

Ornamental Art

Ornamented Art, pure and simple, is like the measure and rhythm of a verse. A verse may scan, may have a proper accent and cadence. In short, may have all the music of harmonious versification, and yet be made up of words that are mere nonsense; and so in ornament, it is not necessary to its beauty, as ornament, that it should have any meaning. It is quite sufficient that it should be beautiful.—F. W. MOODY.

Art Eternal

Not her heroes, but art, made Greece immortal. Shakespeare is worth more to the glory of England than all the victories which he has sung; nay, not to England only is he of greater worth, but to mankind. Dante, Raphael, and Michael Angelo, with many other names of highest power, have made Italy the consecrated land of poetry and of song, the home of beauty and of all loveliness—the native country of the soul.

It is only when we look at art through the purifying and chastening light of time that we fully realize its influence in the history of the human race. The present is always vulgar, loud, glaring and shameless; too real to be beautiful. It is the slave of power and wealth, soiled by the idolatry of success, the hideous counterfeit of merit; but this passes and art remains forever.—SPALDING.

CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

FAYETTE J. CLUTE, Editor and Proprietor

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Mr. Curtis and His Work

The June issue of Scribner's Magazine contains an article from the pen of our Western worker, E. S. Curtis, with a dozen or more handsome reproductions in two colors of his fine Indian pictures. Most of these pictures are full page ones, and excellent as are the reproductions, they but suggest the beauty of the originals. The article is entitled "Vanishing Indian Types," a subject on which no one is better qualified to write than is Mr. Curtis. The strength and beauty of the work is remarkable and stamps its author as an artist as well as a deep student of the subject which has engaged his time and efforts for so many years. Not only do the results proclaim these facts in no uncertain way, but they also demonstrate what can be done when untiring zeal, a fixed purpose and a thorough mastery of photography are also brought to bear upon the work. It is rarely that a magazine of such high standard as the one in question does an article illustrated by photography the honor of running an entire form in two colors that the pictures may be given a semblance of their original values. All praise is due both the author and the publisher for the high tribute paid photography by the results. It might not be out of place to say in this connection that Mr. Muhr, who is in charge of Mr. Curtis' studio at Seattle, has been kind enough to furnish us with a second article describing the process by which these original prints are produced. The original article was destroyed along with our April issue. The new one will be illustrated, if possible, with some very effective reproductions of the pictures which are now in our hands. The method employed is entirely different from any which has been given publicity, and in order that our readers may the better realize this, Dr. D'Arcy Power will contribute an article for the same issue, giving the best of the practical methods so far advanced for the production of prints of a kindred character.

Our New File

The response to our request for back numbers of this magazine, in order that we might replace our file, has been most generous. Quite full sets were immediately placed at our disposal by the American Aristotype Company and The Berlin Analine Works, making it unnecessary for us to call upon more than four or five of our subscribers. Over one hundred sent list of issues in their possession, and exactly eighteen of our subscribers offered to send com-

plete files which they had had bound. These last we did not feel that we could accept for the reason that their being preserved in bindings was evidence that the owners placed a high valuation upon them, and although we have no doubt but what many of the broken files were esteemed by their owners, such odd issues were not suitable for binding and less likely to be preserved. We have kept these lists and any of our subscribers who may wish certain issues, particularly the more recent ones, can be favored with the names and addresses of other subscribers who may possibly favor them with the desired copies. Those who have sent us lists will kindly hold the issues listed in order to give those so desiring time in which to make their wants known.

Another Favor Asked

The Editor had, before the fire, bound volumes of every photographic magazine published in this country and England, dating from its start, or at best, dating back to 1890. Except, in a few rare cases, only the issues for the past year are available in the hands of the publishers. There are, no doubt, many of our readers who have back files of such publications which no longer interest them, or possibly occupy room that is wanted. This was brought forcibly to our mind in a recent talk with a veteran in the professional ranks. He had in his possession, until recently, a full file of Wilson's Photographic Magazine, from its start as an eight page weekly, some forty years ago. Not an issue was missing. Desiring to pay a visit to the East and finding that they occupied room that he felt could be put to better use during his absence, he consigned them all to the tender mercy of the garbage man who charged him an additional amount for the extra work of carrying them out to the reduction furnace. We trust that any of our readers who may be contemplating such action or know of anyone so doing, will kindly communicate with the Editor to the end that he may avail himself of such material, not longer wanted by its owners.

The Northwest Convention

Just as we go to press comes a letter from Secretary-Treasurer, W. G. Emery, of Corvallis, Washington, in which he says that everything points to a most successful gathering at Spokane on September 6th, 7th and 8th. An exceptionally large number of the best manufacturers and dealers have reserved space and will give a continuous series of demonstrations. If enthusiasm and hard work count for anything, there can be no doubt as to the success of this convention. No worker within visiting distance should fail to be in Spokane while the convention is in session. It will be distinguished by the prominence given the education side and particularly that education so necessary to a large proportion of the professional photographers, namely, the handling of the financial side of their business. The photographer who desires to do more than struggle along with a bare competency really cannot afford to stay away.

California Camera Club

Like most of the clubs in old San Francisco, this organization suffered materially by the last disaster; indeed, it may be said to have lost all of its possessions. Nothing was saved. The early hours at which the great catastrophe occurred precluded any possibility of the major portion of the members reaching the rooms in time to save even their individual property. The few who were able to reach the building and climb up those seven flights of stairs, through plaster and debris to the club rooms, did not have a chance to tarry there long, the conflagration soon suggesting the advisibility of a hasty departure with such of their belongings as they could easily carry. Only four members out of a membership of nearly four hundred, saved anything.

In times, such as the city has just been, and still is passing through, one can hardly expect an art, which is cultivated as a pastime, to absorb much of one's attention. There are two many weighty material problems to be solved and that of a means of livelihood suggests to many, no doubt, that as far as photographic art is concerned, one had best "forget it" for the time being. But the period of "forgetfulness" is already passed with the members of this prominent organization. Soon after the disaster, the members were called together, and such as had not temporarily left the city, bestirred themselves in the work of placing the club again in working shape.

A committee, consisting of such enthusiastic workers as Messrs. Albert Le Breton, Herman S. Hoyt and H. G. Aylsworth, was selected to find suitable quarters, and put them in shape for occupancy.

After a very diligent search made the more difficult by the fact of the scarcity of sufficiently large and suitable buildings left standing, the committee decided on the residence situated at 2206 Steiner Street, near Sacramento, within one block of Fillmore Street, now the principal thoroughfare of the city. Here this committee is devoting all its time and attention to the changes necessitated in the building and to the furnishing of the rooms. It is gratifying to find that the quarters, as regards space, will compare favorably with those in the Academy of Sciences Building. A gallery fourteen by twenty-four feet is now being constructed with an unobstructed north light, giving excellent facilities for portraiture. The bromide enlarging room is eleven by fourteen feet, while the lens and camera acquired for enlarging purposes will take eleven by fourteen negatives. Fine Velox rooms, lantern slide, and developing rooms are also being installed, and altogether the quarters will leave nothing to be desired in the way of working rooms. A house warming is planned for the early part of August, and from thence on photography will again flourish as of yore among the enthusiastic and able amateur photographers of the new San Francisco.

Arrangements have already been made for the resumption of the popular monthly lectures given by the club for so many years. The first of the new series will be given at Plymouth Congregational Church, on Post, near Webster, in the second week of August, Mr. Le Breton having, in response to a general request, consented to give some of his original sketches and poems, with illustrations by himself and other members of the club.

THE AMATEUR AND HIS TROUBLES

By Fayette J. Clute

The Stripping of Films

The same good friend, writing on this subject, says: "This is one of the easiest things in photography if the right method is understood. I hadn't tried it for two years, but thinking to write you as to my method, I decided that I would be on the safe side and make a trial first, and this is the way I proceeded. Took half a teaspoonful of flur spar, or spathum fluoric as the druggist calls it; put it in a rubber or composition tray, added about the same amount of muriatic acid, no need of being exact in the amounts, and then four ounces of water. Taking the negative, a straight edge and a pen knife, I cut through the film all around about an eighth of an inch from the edge, put the negative in the tray containing the solution and rocked it gently for about five minues. Trying the edge of the film with my finger tip I found it would come off easily and so I continued to gently roll up the main part of the film with my finger tips when it readily came off the glass. The film was next put in some clear water, given a few changes and at the same time flatened out. Next I slipped a clean glass underneath, smoothing out the film with finger tips, removed together from the water and stood up to dry. The plate was fixed in plain hypo and thoroughly washed about six months ago, and was placed dry in the above solution. Negatives fixed in some of the hardening or alum-hypo baths might act differently. One caution is worth mentioning: If one's skin is sensitive it is best to keep the fingers out of the solution and use instead a swab of cotton tied on the end of a stick. Personally, the solution causes me no inconvenience, but I am always careful to wash my hands well immediately after dipping them in the solution. This method enlarges the film slightly so that I generally get on a plate of the same size, all I want of the original negative." The editor would like to add to the above a suggestion that the new support be an old negative from which the film has not been removed but from which all the image has been reduced. This insures good adhesion. Some of my experiments made years ago in which stripped films were placed directly on clean glass go to show that they will in time flake away, particularly at the edges. A coating of rubber solution such as photo engravers use might be a good coating, but my practice has been to save all undeveloped or doubtful plates and fix them out, laying the resultant clear glass coated with gelatine aside to be used for this purpose.

Fixing Velox Prints

In a recent letter, our valued contributor, Edgar A. Cohen, calls our attention to the fact that Mr. Turner's article on the working of developing papers in our May issue might prove misleading to the less advanced worker, particularly if he were one who did not read carefully or with not enough care to notice what was said at the close of the article, concerning the effects of the acid. Continuing, he says: "One might infer from the article that safety lies only in allowing the prints to remain in the fixing bath for from fifteen to thirty seconds, while as a matter of fact, if the bath be kept strongly acid, three seconds is sufficient to permit examination by unsubdued daylight, in perfect safety. Of course, if the worker desires to carry the print into another room in order to allow examination of some duration, it had best be allowed to remain the full

thirty seconds as advised. A one pound package of the Eastman Acid Fixing Powder, costing twenty-five cents, will make sixty-four ounces of solution that for a cool climate like that enjoyed by us, when first made is sufficiently strong in acid. In my own practice I filter the freshly made solution and then use a tray large enough to hold the entire sixty-four ounces, making as I often do a hundred and fifty prints in a day I require plenty of room in the bath to handle them properly. During the first day's work no aditional acid is necessary; but thereafter, say twice a day, I add about half an ounce of the commercial acetic acid to the bath. It is the acid and not the hypo that becomes exhausted in a fixing bath, but to be certain that I am on the safe side, after the first five hundred prints, I add about eight ounces of granulated hypo. The bath soon becomes slightly discolored, but as long as it is kept up to full strength with acid, there will be no dimunition in the quality of the prints. As each print is developed I rinse it in a tray of clean water, hold it up by one corner until the water drains off, and then slide it face downward into the bath. Here it is kept moving for several seconds after which I held it up by one corner to the light to see that it is all right. The advantage of making this initial immersion in the fixing bath a short one is due to the fact that there is less danger of an air bubble forming on the print, which would prevent the fixing bath reaching the spot and allow the developer to continue its work, thereby forming a dark spot where the film is so protected. By this method of working I am troubled with neither spots or stains although I am in the habit of fixing eleven or twelve hundred 5x7 prints before throwing away a bath and preparing a new one. In a hot climate a bath much stronger in acid is necessary.

Printing in Figures

An amateur friend came to me recently while I was in San Francisco and explained his difficulty. It seems that he had taken the picture of a friend's residence with all the members of the family with one exception, posed on the front porch. The result was a particularly fine negative through a combination of good lighting, happy grouping and other fortunate conditions. The one exception, the lord and master, was abroad at the time and died before his return. My friend had several good negatives of him taken but a few weeks before, but the family particularly wished for a print from the group negative with a portrait of the deceased included. I advised my friend to go about it in a way which I had seen adopted by a professional in printing clouds into a landscape. He tried it and at the second trial secured a perfect print, duplicating the result a number of times. He first took the negative containing the single figure and from it made a print on solio paper. The figure was carefully cut out with a very sharp pointed knife and carefully glued to the glass side of the group negative in such a position that the figure fitted naturally into the group. The part of the print outlining the figure was in turn fastened to the back of the negative from which it was printed. Thus prepared, an enlargement was first made from the negative carrying the cut out figure, giving just enough exposure to give a correctly exposed print. This was partially developed, just enough to give a faint image showing the blank figure-image, and the developer rinsed off. While doing this his assistant had placed the other negative in position and the wet print was again tacked to the board and the figure exposed for, after first arranging it to come exactly within the blank space caused by the cut-out figure on the other negative. The print was then returned to the developer and brought up to full density. The only precautions necessary are to see that the two exposures are absolutely correct, as the process hinges on the taking advantage of the well known fact that a correctly exposed print from a good negative will develope up to the right density and then stop or practically do so. The second exposure made on the wet paper must be a trifle longer than would be required under the same conditions but using the paper dry. All the operations being performed with care, the resultant print will show little if any

indication of having been dodged and in the final development the last printing will catch up with the image first developed and present the same tone and depth.

How the Simplex Exposure Meter Works

A correspondent in Oregon writes to ask on what theory the meter works. The meter has a series of holes varying in size and so graduated that the exposure with any stop is indicated opposite each one for a subject in such a light that the detail can be plainly seen by the eye when the hole is interposed. The eye, to see an object, clearly requires that a certain amount of light fall upon its retina. Any slight variation in the intensity or brightness of the light effects the pupil of the eye, opening or closing it as the light is diminished or increased. The meter detects these variations and indicates the change in the exposure with the stop for the negative desired. It acts to a certain extent as a measure comparatively, of the diameter of the pupil of the eye, and its readings coincides with the pupil's variation. The light that falls on the sensitive plate in the camera is the light that radiates from the surface of the object being photographed. If the light is weak and the surrounding objects are dark in color there will be a comparatively small amount of light radiated from it. The eye, under these conditions, opens its pupil the required amount. Observing the object through a hole in the meter that is too small it appears dim and the detail cannot be seen until observed through a hole that is about the size of the eye's pupil. The retina of the eye must be illuminated by a sufficient amount of light in order that an object may be distinguished clearly. The fact that the eye requires a certain quantity of light in order that the object be seen clearly, makes the Simplex Meter a measure of the amount of light radiated from any object observed through its apertures. If the retina of the eye receives more light than is required to see the object clearly, then the object appears brighter or lighter, but no more of its detail can be seen than with a lesser amount of light. The meter measures the volume of the light by various sizes of holes while the eye measures its intensity, the eye and the meter together measure the quantity of the light. The length of exposure required for any negative depends directly upon the quantity or amount of light admitted to the surface of the plate. The advantages of the Simplex Exposure Meter lies in the accuracy and rapidity by which its user can determine the true exposure for any subjest in either sunlight, gaslight, or other conditions of illumination.

An Extemporized Ground Glass

One of my most valued correspondents, Henry Hall of Vineland, New Jersey, writes in a recent letter: "One of your contributors tells how to make a ground glass when the original one is broken and you are some distance from your base of supplies. I have a method that I think is even more simple than the plan given. I was on a tour one time and wanted to make an exposure, but the ground glass of my camera was not available as it had been packed separately. As it was a holiday and no chance to buy anything with the stores all closed, I took an old negative, cleaned off the film with some hot water and then applied a mixture of flour and water, giving the glass a thin coating and allowing it to dry. It answered the purpose admirably and I had no trouble in focussing all my views sharply."

A Hint on Using Flash Sheets

One of my Baltimore correspondents, Mr. Holmes, gives a wrinkle in one of his recent letters that may be advantageous under certain conditions. It simply consists of allowing one or more drops of water to fall from the end of the finger onto the upper edge of the sheet as it is pinned up ready for lighting, doing this shortly before the burning so that the water wil not have time to evaporate. It prolongs the exposure quite materially, according to the amount of water used, and Mr. Holmes is inclined to believe that the total amount of actinic effect on the plate is increased at the same time, although he is not sure, as he has made no exact tests in order to determine if such is really the case.

A PHOTOGRAPHIC DIGEST

By H. D'Arcy Power, M. D.

All communications for this Department should be addressed to H. D'Arcy Power, M. D., Burlingame, San Mateo Co., California

Making Enlargements from Solio Prints

Readers of this journal will remember that some two years ago I wrote an article giving my reasons for believing that the best method of all for making an enlarged negative is to copy an untoned and unfixed solio print in the camera; using as an illuminant magnesium ribbon burned directly behind the lens so as to entirely avoid oblique illumination and consequent grain.

In the January number of the Photogram, a writer advocates the same method and makes therein a statement that is useful and interesting. Speaking on relation between the amount of illumination and the varying extension of bellows accompanying different amounts of magnification, this writer says:

"We may always adhere to the same stop and the same amount of magnesium ribbon whatever our camera extension, providing we keep to one lens and always fix the ribbon to move with the camera front. This method adjusts the exposure itself. To prove the correctness of this by example: The distance of ribbon from copy is thirteen inches with a camera extension of twenty-four inches, stop one inch diameter, equivalent to f-24; and in another instance the distance of ribbon from copy is twenty-six inches, with a camera extension of twelve inches, with a stop of one inch diameter. In the latter case, the light being twice the distance away, and 'the illumination being inversely as the square of the distance from the source of light,' we must either use four times the quantity of ribbon or adjust the stop. But the extension of my camera in this latter instance is twelve inches, with stop one inch diameter, the f value being f-12, and requiring only one-fourth the exposure of the former case, therefore we see how this method adjusts itself.

Of course, if the ribbon had been left in the former position, thirteen inches from the copy, instead of using sixty inches, fifteen inches would have sufficed. Thus we can economize in magnesium; but my own feeling is that it is better to economize in the worry of calculation."

Henry Maclean, B. A., writing in the Photographic News, says: In a recent issue the editor described his method of securing warm tones on bromide paper by direct development, and in particular drew attention to the claims of pyro as a useful developer for that purpose. This application of pyro has been advocated more than once, but the usual mistake that is made by the experimenter is that not sufficient sulphite is added, with the result the prints are badly stained. The formula given by the editor is a good one, and avoids this defect, but in cases where prolonged development is necessary to secure very warm tones, even this formula will give a certain amount of stain. It will be remembered that the following was recommended:

A.—Pyrogallic acid	30 grains
Metol	30 grains
Sulphite of soda	1 ounce
Bromide of potassium	30 grains
Water	20 ounces
B.—Carbonate of Soda	3 ounces
Sulphite of soda	½ ounce
Water	20 ounces

Equal parts of each are taken, and with a normal exposure a pleasing warm black tone is obtained. If development is completed too soon the tones will suffer. The longer the development takes the richer the color will be, and the better the rendering of the shadow details. The de-

veloper should, therefore, be diluted considerably if the negative shows any indication of flatness. With a plucky negative this precaution will not be so necessary.

I have now worked out the following table for use with this formula, and its application should assist in determining the definite recurrence of any given tone obtainable on a constant make of bromide paper. In the table given it is assumed that ten seconds' exposure with a normal negative is sufficient to give a black color with a normal amidol or metal-hydroquinone developer. The first column gives the exposure, the second shows the amount of water used to dilute one ounce of pyro developer, the third column the amount of 10 per cent bromide solution added and the last column gives the resultant color.

15 secs.	2 oz.		Warm black
20 secs.	4 oz.	10 minims	Bronze-black
25 secs.	8 oz.	20 minims	Warm Olive
30 secs.	16 oz.	30 minims	Bronze Sepia
40 secs.	30 oz.	40 minims	Warm Sepia
50 secs.	60 oz.	50 minims	Pinky brown
60 secs.	80 oz.	60 minims	Rusty red

The time of development increases in proportion to the amount of water added.

Figures in Landscapes

The British Journal of Photography gives the following excellent method of introducing figures or other objects into prints that require such addition. The writer says:

"Suppose, for example, it is desired to introduce a figure or two into a landscape or maybe a vehicle of some sort into a photograph of a road or land. We must obtain a small negative of the figures and it goes without saying that they must be of suitable size and the lighting must correspond with that of the picture in which they are to be introduced. The background and everything else not desired is then neatly blocked out with black varnish and this negative is then printed to the right depth to suit the picture on a piece of paper the size of the landscape negative, the portions beyond the small negative being shielded from light while printing. We thus have the figure on white paper. It is then neatly painted over with gamboge. The landscape is then printed, the paper being put on the negative so that the figure appears in the place intended and the landscape printed. The picture is then toned and fixed in the ordinary way, whilst the free silver is washed out of the paper, prior to toning the gamboge is also washed off and leaves no stain behind—that is if albumen or collodiochloride paper be employed. This is not the case with all samples of gelatine papers, as with some a stain is left, with others, however, there may be none."

Local Abrasion, or White Retouching

In the Dresden journal, Apollo, according to the Amateur Photographer (Eng.), the use of small and fine riffler files, so much employed by jewelers, is recommended for white retouching on the negative. The riffler file has a round or convex cutting face, something like the round back of a minute elongated spoon, but the working end being bent over for use pencil-fashion; but the patterns obtainable vary considerably, so that sharp, light lines may be cut half-way, or farther, into the negative film. Riffler files of the necessary fineness and smallness are not invariably stocked at the ordinary tool shops, but the fine rifflers are readily obtainable at those stores where clock-makers and jewelers' materials are sold. In come cases rifflers cut on stems as small as fine needles can be obtained. Another method of locally reducing the thickness of the negative film, and so dealing with halation and like defects, is recommended by Wurtz, and this is a modification of the old alcohol method. Scrapers or points of various form are cut out of wood of medium hardness, and these may be used without covering, or after being covered by winding round them cotton or textile material. These rubbers are used with alcohol, together with an abrasive powder, which may range from fine sifted pumice to tripoli. With such rubbers, the ill-effects of halation may be reduced, and broad effects of reduction may be realized. It is obvious-

ly desirable to do the white or light retouching on the negative (i. e., dark on the print) before the pencil work or additive retouching.

Terra Cotta Tones on Bromide Paper

Stanley Aldridge, writing in the Amateur Protographer (Eng.), gives the following formula: Bleach the print with a 2½ per cent solution of potassium bichromate, to which the same quantity of hydrochloric acid has been added, and after washing until all yellow stain is removed, redeveloped in a 2½ per cent solution of Schlipp's salts, afterwards washing for half an hour. Possibly the Eastman bleaching capsules (potasium ferocyanide and bromide) used for the sulphur toning of Velox, would do in place of the acid bichromate solution; but the tone might vary, as the bichromate bleacher intensifies the image by the addition of chromium to the silver.

A Simple Method of Intensification

It seems that L. Lesegang some time ago stated that if a weak negative be wetted and then rapidly dried by heat, it became much intensified. A correspondent of "Photography" has been testing this statement and according to that journal he has forwarded negatives showing a doubling of the density as a result of this proceedure. It appears to me that it would be a wise precaution to give the negative a preliminary soaking in a 5 per cent formaline bath before risking the application of heat. Formalized gelatine will not melt and when in a hurry I have often rapidly dried negatives over a Bursen burner so treated.

A New Acid Fixing Bath

According to M. Reep (Bull. Soc. Phot. From.) a good acid bath can be made by dissolving six ounces of hypo in fifteen ounces of warm water, adding one ounce of boric acid, and making up to 20 ounces with water. Plates or papers fixed therein must not be acid or contain alum, or sulphur will be precipitated.

OUR BOOK SHELF

Stereoscopic Photography

This magazine has always championed the practice of stereoscopic picture making; it has published several good articles dealing with the work and will shortly have a most exhaustive one on the subject. Under these circumstances we are pleased to have the opportunity of advising our readers that W. C. Marley of 149 Hillside Avenue, Newark, New Jersey, has secured a supply of Theodore Brown's book, "Stereoscopic Phenomena of Light and Sight," which he will be pleased to send postpaid anywhere in the United States, Canada or Mexico, on receipt of one dollar. Mr. Brown, the author of the book, is the well-known President of the United Stereoscopic Society, and those interested in stereoscopic work would do well to write him at Bournemouth, England, for circulars describing his various devices, including his duplicator, this latter enabling one to most successfully secure stereoscopic exposures simultaneously with one exposure with one lens. Returning to the book, it is an excellently gotten-up volume, handsomely illustrated and well bound in cloth. The only fault to be found with it is with the title; it seemingly suggesting a somewhat scientific and theoretical treatment of the subject, while the truth is that the subject is handled in a most practical and simple style, covering the ground thoroughly. At the same time, the exhaustive nature of the treatise gives ample opportunity for the discussion of the optical points involved. We can recommend the book most highly and in passing should not neglect to mention the excellent monograph by the same author, "Photo-Miniature" No. 5. Both should be in the possession of every photographer desirous of acquainting himself with the work of making stereoscopic views, and were the value of these pictures better understood stereoscopic workers would be increased in number a hundred fold.

Club Notes

Chicago Camera Club Election

At the annual meeting of the Chicago Camera Club, June 7, 1906, the following officers and directors were elected to serve for the ensuing year: President, F. M. Tuckerman; Vice-President, Dr. A. Schalek; Treasurer, W. H. Edwards; Secretary, W. F. Gingrich; Directors, E. W. Thomas, D. H. Brookins and A. L. Fitch. E. W. Thomas was elected Lantern Slide Director. A fine portrait camera has been added to the equipment of the Club and with the fine light obtained by enlarging the rooms, the camera will be of great value to the members.

W. F. Gingrich, Secy.
485 Washington Boulevard, Chicago.

New Zealand International Exhibition

This exhibition, to be held at Hagley Park, Christchurch, New Zealand, November, December, 1906; January, February, March and the early part of April, 1907, has as its patron his Excellency the Governor, the Rt. Hon. William Lee, Baron Plunkett, K. C. R. V. O. The President is the Rt. Hon. the Premier R. J. Seddon, J. C., L. L. D.; the Vice-Presidents number some ten or a dozen of the most prominent men in the commonwealth, including the Mayors of Christchurch, Dunedin, Wellington and Auckland. The Secretary is Mr. E. J. Righton of 161 Hereford Street, Christchurch, New Zealand.

The Photographic Section is in charge of a committee, of which the Secretary, R. C. Bishop, is chairman. Mrs. Righton will be pleased to send a copy of the rules and regulations governing the photographic exhibition section, together with entry blanks and all information as to forwarding. In writing, specify that you wish blanks for the photographic section.

The committee hopes to be favored with many entries from abroad, and as October 1st is the date on which they cease to receive, plenty of time is afforded intended exhibitors.

The Antelope's Flash-Light Signal

Another remarkable detail of the Antelope's anatomy is the white area on each buttock. Although it seems at first like the rest of his spots, a mere patch of white coat, it is found to be specialized for an important service. It is composed of hair graded from short in the center to long at the front edges. Under the skin of the part is a circular muscle by means of which the hair can, in a moment, be raised and spread radially into two great blooming twin chrysanthemums, more or less flattened at the center. When this is done in bright sunlight, they shine like tin pans, giving flashes of light that can be seen farther than the animal itself, affording a conspicous identification mark that must be of great service to the species.

As soon, therefore, as an antelope sees some strange or thrilling object, this muscle acts, and the rump patch is instantly changed into a great double patch of snow; and by its flashing spreads the alarm. This, it will be seen, is simply a heliograph. Man flatters himself that he was the inventor of flash communication; but he is wrong; the antelope had it first. They used it thousands of generations before man ever dreamed of it.

The bristling mane of the species is erected under excitement at the same time with the dics.—From "The Prong-Horned Antelope," by Ernest Thompson Seton, in the July Scribner.

Binks—Who is that debater who is so ably taking the negative of the question?

Jinks—Oh, that's Snapem, the photographer. He never takes anything else.—Pacific Monthly.

Notes and Comment

The Santa Fe Trip to Moqui Land and the Grand Canyon

So many readers have asked for information concerning the interesting trip which Mrs. Kemp so ably described in her article on the Snake Dance in our last December issue that we are pleased to at last be able to announce, through the kindness of Fred W. Prince, the well-known City Ticket Agent of the Santa Fe, the following particulars concerning the party which he will conduct to Moqui Land for the annual wierd ceremony, "The Prayer for Rain," or, as it is more popularly known, "The Snake Dance."

The dance will take place about August 15th. The date is definitely decided by the priests some twelve days in advance. An Indian runner will leave Oraibi when the date is announced, and then the agent will wire Mr. Prince so that he can notify different members of the party as to the exact date on which they will leave San Francisco. The distance from Canyon Diablo to Oraibi is about sixty-five miles. A stopover will be made on either the going or return trip one day at "The Fields," which is the half way point, and there we will witness a big Navajo feast, pony races, foot races, lariating wild horses, Indian dances, and the like. Every one going from here will be interested in the trip to the Grand Canyon, and will surely wish to go up there, whether they had seen it before or not. The rate mentioned will, as stated, include the side trip, which is ordinarily $6.50, from Williams to the Canyon and return. The railroad will make a rate of $30.00 from here to the Canyon and return to any persons who may not have the time or inclination to make the trip to Moqui Land. Mr. Prince has taken up the matter with Mr. Volz, the Indian trader, who will look after the arrangements from Canyon Diablo, and he realizes the need of providing everything possible to insure the party being made as comfortable as possible, will be sure to have plenty of good substantial food, and will have his wagons and teams in first-class condition. He is prepared to take care of one hundred people. He has had a lot of experience in handling parties to and from the Indian Country. and will take the best of care of the party. A number of people in the East will join at Canyon Diablo—people who are interested in seeing new and strange sights, and who have the good sense to take matters as they come, and go in for a general good time.

The trip will be unique, and will give an unequalled opportunity of witnessing the remarkable wierd ceremony, "A Prayer for Rain," popularly known as the "Moqui Snake Dance." There is a round of ceremonies continuing for nine days. The public performance, "The Dance with the Snakes" (rattlesnakes,, too), takes place on the ninth or last day, which is the time when the general public are invited to be present. It will also give a splendid opportunity for those who are interested in seeing how the primitive people of Moqui Land live, also of learning something of their customs and occupations. The party will be provided with permits from the United States Indian agent, which will enable it to visit every part of the villages. It is Mr. Prince's intention to have the party witness a second dance which will be held at Mishongnovi or Shipaulovi, villages of the second mesa. This dance will take place the day following the one at Oraibi, and I am told it is much wilder than any of the dances held at the other villages. The Navajo sports at "The Fields" will be wild, exciting and interesting.

As to cost,, to Canyon Diablo, where the party will leave the railroad, and return, including side trip from Williams to the Grand Canyon, there will be a rate of $35.00. This is for transporta-

tion only and does not cover cost of meals and berths en route. Meals at the Harvey station are 75 cents each. Cost of sleeper is $5.00 in each direction, standard car; $2.50 tourist. From Canyon Diablo to Oraibi, the Moqui Pueblo, where the snake dance will take place, and return, the charge will be $6.00 per day for each person; this includes lodging and meals from the time of leaving the railroad station until the return to Canyon Diablo. It will take from seven to nine days to make this part of the trip, counting on say eight days, this would cost but $48.00. This will make a total cost, exclusive of meals on the train, $93.00, or $88.00, according to kind of sleeper. One should figure on $110.00 to $125.00 for the trip; this would cover hotel expenses at the Canyon, meals en route and other expenses.

Wear thick-soled shoes; smoked spectacles or eye-glasses will afford protection from the sun; hats should be of straw and have a broad brim; outing suits of light colors are preferable; the underclothing should be of moderate weight. Indian children love candy; provide yourself with a supply. Bring your camera, but protect its contents from the intense light of the Arizona sunshine. Those desiring to join the party should notify Mr. Prince well in advance, in order that he may figure on supplies and the like. The party will leave San Francisco at 8 p. m. on train No. 8, presumably about August 12th. There will be plenty of sleeping car space, and everything will be done to make the trip a comfortable one, and one will see all that is to be seen in that wonderful country.

Developer Irritation

A great many photographic workers are troubled with irritation of the fingers by Metol and certain other chemicals extensively used in photography. The trouble can always be avoided by the use of rubber gloves, but it is very difficult to handle delicate prints with the gloved fingers. Doubtless the most practical way out is for those who are subject to the irritation to employ other chemicals in place of the objectionable ones, or to use an application to the fingers which will overcome the trouble. Many photographic workers have learned how to avoid this irritation in their own work, but there is no general source of information on the subject.

Mr. E. A. Turner, manager of the Yunit Chemical Co., of Rochester, N. Y., with a view to finding some relief, will be glad to hear from all photographers, amateur and professional, who have been troubled with irritation caused by photographic chemicals. Write him the trouble you have experienced and state how you have succeeded in preventing it. The information gleaned from the letter will be put in printed form and a copy will be mailed, gratis ,to all who have shown their interest by writing to Mr. Turner.

An Announcement

CAMERA CRAFT--

Gentlemen: The Prosh Photo, Shutter & Optical Company has recently been incorporated, have purchased all the shutter patents and good will of the Prosch Manufacturing Company, and have opened offices at 1133 Broadway, with factory at 466 Seventeenth Street, Brooklyn, N. Y. Mr. Tatnall, formerly of the Prosch Manufacturing Company, is President and Maximilian Klaiber, who has been connected with the Prosch Manufacturing Company in the shutter department since 1886, is Treasurer and General Manager.

The Prosch Manufacturing Company continues in the flash lamp and powder business as heretofore.

Yours truly,

Prosch Photo. Shutter & Pptical Co.

J. L. TATNALL, President.

Under New Management

To the Trade:

We hereby wish to announce that we have this day purchased the entire photographic stock in this city, formally owned by Mr. Henry Reimers, and shall continue the business as before under the above name.

Having had a long experience in the photo supply business and also being connected with Mr. Reimers for a number of years, we can assure the photo-

graphic trade the same courteous and prompt treatment in handling their orders as was extended in the past by our predecessor.

We beg to ask for a continuance of the patronage extended to Mr. Reimers, and in return we can assure you prompt attention of all orders intrusted to us.

Soliciting your business, we beg to remain,

Yours very truly,
Northern Supply Co.
P. Hausenstein.
C. C. Kastenholz.

To the Trade:

I hereby advise that I have to-day sold to Messrs Kastenholz and Hauenstein (both former employes for the past 12 years) my Minneapolis branch house, which shall hereafter be known as Northern Photo Supply Co. All accounts and remittances for purchases up to June 1st should be sent to Henry Reimers, Milwaukee, Wis.

I wish to thank the photographers of the Northwest for the patronage and favors extended to my representatives during the past two years, and trust that the kindly feeling will continue toward my successors, both of whom are well posted and capable of running a first-class, up-to-date stock house.

My Milwaukee house will remain the same and will be continued under my personal management.

With best wishes, I am,
Very truly yours,
Henry Reimers.

San Francisco's Courage

In complying with the request to write a few words for the Pacific Monthly apropos of the recent earthquake and conflagration in San Francisco, I feel that I can do nothing better than to dwell briefly on the wonderful calmness and courage of the people of this city, in the face of one of the most appalling calamities that ever befell any community. San Francisco, no doubt, has, or, at least, had its full share of criminals and equally worthless and dangerous person, who would have been more than glad to take advantage of the opportunity to loot such a treasure house as the banks, stores and dwellings of the opulent metropolis of the Pacific Coast. These people were overawed by the rifles with fixed bayonets, and the full cartridge belts of one thousand, seven hundred regular soldiers, and a large force of National Guards in addition to the police force of the city.

The great majority of the people, however, of course, need not be considered in such a connection. Although they saw their homes being destroyed, they were remarkably calm and cool and amenable to control; troops and police rarely found it necessary to use force in controlling the vast throng of three hundred thousand people, who, in three days and nights, were rendered homeless.

Present indications are that the courage of the people in rehabilitating the city will be as wonderful as the calmness with which they have faced the disaster from the beginning.—Brigadier-General Funston in The Pacific Monthly for July.

For Correct Exposure

A copy of the sixtieth thousand edition of the Photo-Beacon Exposure Card has just reached us and the familiar linen cover is like the face of an old friend. It is a pleasure to note that the change in the name from "Tables" to "Card" signifies an improvement in the way of simplification and ease of using. Any other form of improvement being evidently out of the question. Several years ago we gave the original tables a careful trial, not only to satisfy ourselves as to their value, but to answer for Mr. Todd the question in his mind as to the correctness of the tables for San Francisco, the city being so surrounded by water that he felt shorter timing might be allowable. While his theory had good foundation it is evident that any advantage we might have in this direction is counteracted either by the low altitude or the moist atmosphere always present, or both. The tables were found absolutely correct for this locality as they have been found for others. The new "card," although in reality a handsome, linen covered folder

containing four pages, is most convenient and practical. Its accuracy has never been questioned. Twenty-five cents will bring it from the Photo-Beacon Co., Security Building, Chicago, Ills. Most dealers carry them in stock also.

A Fine Photograph

A large panorama of the San Francisco disaster was taken with a Cylo camera, the only one of its kind then on the Pacific Coast. The picture is 7½ x42 inches, and is a contact print made from a film of this length. It is printed on heavy green or black carbon paper. The picture was taken from the roof of the St. Francis Hotel, shortly after noon on April 18th. It is the only actual panorama that was made, and shows the principal buildings of the city before the flames reached them, also the widespread conflagration that was then raging in the business district.

This is a beautiful production, and conceded by good judges to be the best picture ever taken of a fire. The Pillsbury Picture Company, 40 Bacon Block, Oakland, Cal., are selling single copies sent by post, upon receipt of $5.00, with the understanding that if not satisfactory the picture can be returned and the money will be refunded. They are offering this with every confidence that it will be fully appreciated, and particularly interesting to those who failed to witness the conflagration.

The New Graflex Catalogue

The new Graflex catalogue is a handsome booklet of thirty-two well illustrated and handsomely printed pages with a lithographed and pebbled cover, making it one of the most attractive catalogues of the year from that city of beautiful photographic booklets, Rochester. The new Auto Graflex is fully described, together with many illustrations, showing its construction and the varied scope of its field. It can be held in the ordinary way and the image viewed as reflected upon the ground glass; held higher, the image may be studied on the mirror in top of hood; held still higher, with the camera reversed and above the head, the image is as well available when extreme elevation is desired. Held with the lens pointing to the side a perfect "deceptive angle" camera results, enabling the worker to secure views while apparently pointing the camera in another direction.

Perhaps the most interesting of the new models and the one that will be found most popular, is the Auto Graflex, Jr. A new feature in this camera is the method of focusing. Fitted as it is with a Cooke focusing lens manufactured especially for the camera, all necessity of a bellows or other means of extending the front is done away with. The convenience of this feature in addition to the saving of bulk, together with the moderate price, will make this a favorite camera with those desiring an equipment adapted to ultra rapid work and at the same time available for slow automatic and time exposures of any duration. We hope to have illustrations to enable us to give full details of this new camera in our next issue. The camera will not be ready for delivery before August 1st, but an early order will insure more prompt delivery.

Special Instructions

The Yunit Chemical Company, of Rochester, N. Y., have had printed a small sheet of special instructions for the drying of Yunox prints, when it is desired to have them perfectly flat when dry. Anyone who is interested can secure a copy by dropping a card. They report a most gratifying number of inquiries concerning their products and are well pleased with the satisfaction their goods are giving their many new customers.

The Packard-Ideal

The Packard Shutters have been made and sold to the trade for more than fifteen years. The makers, in presenting the line, at this time, do so with confidence and satisfaction, calling attention to the improvements they have made the past year and to the superior workmanship and construction. Also to their

latest production, an entirely new silent studio shutter, the Packard Ideal.

With improvements, Packards have always been progressive and in the lead. In this new shutter they have so nearly attained perfection in the extreme simplicity of construction and smoothness of action that the results reached are even better than expected. They have done away with all loose parts or adjustments, the shutters are very compact, self-contained, occupying little space, and are easily fitted to any camera.

These shutters are designed for studio work and go on the front board inside the camera. Being only 3-16 of an inch in thickness, and used behind the lens, opportunity is given to cover a larger plate than if a much thicker or wooden back shutter is used. Packard construction is such that the correct exposure is made; it works rapidly, easily and noiselessly, will balance open while focusing, is practical, reliable and durable. In fact, the mechanism is so simple that friction and wear is reduced to nothing. At no time during an exposure is there any jar or vibration. No "rattle or click" in opening—this noiseless feature alone is greatly appreciated in this class of shutters.

The material, workmanship and finish is of the very best—all shutters being well made, mechanically perfect and nicely finished.

"The Velox Book"

Or, as the title continues: "The Working of a Simple Paper Told in Simple Terms." This is a neat little booklet of forty pages that has just been gotten out by the Nepera Division of the Eastman Kodak Company for the benefit of those using and about to use Velox papers. The brochure goes into the matter of Velox printing with a thoroughness that insures every point being covered. A glossary covers six pages giving the exact photographic meaning of every word used concerning which there may be the least doubt, still further assuring the value of the matter incorporated in the booklet. Double printing to secure border designs, particularly pleasing on post cards, is fully described with illustrations; in fact, the matter is explained by cuts wherever their use will assist. Many new and interesting formulas are incorporated such as one for rich blue tones and another for rich red. Reading it over one wonders if any possible hint that would facilitate the work can be omitted. The booklet will be supplied by all the dealers or can be obtained direct from the Nepera Division, Eastman Kodak Company, Rochester, N. Y.

Negatives Wanted

The Bausch & Lomb Optical Company announce that they are desirous of securing views of famous places in the United States and Canada and will pay $3.00 each for negatives made with any of their Anastigmat lenses, that is with the Bausch & Lomb-Zeiss Unar, Tessar, Protar IIa IV, V, VII, VIIa, and the Bausch & Lomb Plastignat.

The views may be of famous buildings, churches, statues, monuments, of well-known objects in nature as the Grand Canyon of Arizona, Yosemite Valley, anything that is renowned in history, poem or story. This would naturally exclude subjects which, interesting and picturesque in themselves, have only a local value, as a library or government building in some city or town.

Interior views also will be accepted, but there must be some interest other than purely local connected with the place.

The negatives are to be no larger than 5x7 and no smaller than 3 ¼x3 ¼. Prints may be submitted to the Bausch & Lomb Optical Company, Rochester, N. Y., at any time, the sooner the better. They reserve the right to accept or reject any or all prints submitted, and in the event of the purchase of negatives to use them in any way they choose for purposes of general publicity.

Prints should be plainly marked on the back with full data, including subject of picture, name of lens, size, stop, time of exposure, name and address of sender.

If senders of prints desire them returned it will be necessary to enclose stamps for that purpose.

The C. P. Goerz Silver-Cup Competition

The C. P. Goerz Optical Works of New York take pleasure in stating that they have offered to the professional photographers of the United States and Canada a silver trophy, in the form of a cup, of a value of $600, on the following contions:

First. The silver cup will be offered as a prize to the successful competitor who shall have the award twice in succession or three times in all.

Second. Each successful competitor, except the final owner of the cup, will be presented with a prize of one hundred dollars, payable in gold or in goods of our manufacture, at his option.

Third. The competition is open to all bona-fide professional portrait photographers of the United States and Canada.

Fourth. Portraits only are accepted in this competition. Subject, size, kind and number of prints are entirely at the discretion of the competitor.

Fifth. Every photographer desiring to compete is invited to send in his name to the C. P. Goerz Optical Works, and will receive in return a number with which he is to mark his picture or pictures. Should any competitor send in more than one picture, then each one must be numbered and marked with the letters a, b, c, etc., in addition to the number.

Sixth. The pictures sent in for competition will be exhibited at the National Conventions of the P. A. of A. by the C. P. Goerz Optical Works, who, for that purpose, bind themselves to rent adequate space in the coming conventions.

Seventh. All competing pictures are to be mounted and suitably framed.

Eighth. The prize-winning picture will become the property of the C. P. Goerz Optical Works. Copyright, if any, remains vested in the competitor.

Ninth. No picture having won a prize in this competition can be entered a second time.

Tenth. All successive awards will be made during the Exposition of the National Conventions of P. A. of A. All competing pictures, marked in accordance with rule five are to be sent prepaid to C. P. Goerz, care National Convention, or, before opening of same, to C. P. Goerz Optical Works, 52 Union Square, New York.

Eleventh. The C. P. Goerz Optical Works will name a jury of well-known members of P. A. of A. to pass on the merit of the pictures sent in, and to make the award. The names of the jurors will be announced a few weeks prior to the meeting of the Convention.

Twelfth. The jurors will award the prize to the picture considered by a majority of them to possess the highest artistic value, combined with the most perfect technique.

Thirteenth. The jury, on having made its award, will inform the donor of the number of the winning picture. The donor will thereupon compare the number with his list of competitors, and attach to the successful picture the name of the winner, and the mention of its award.

The number-list, being a confidential document, shall not pass out of the hands of the donor or his representative. The names of unsuccessful competitors will not be published without their special consent.

Fourteenth. The decision of the jury, or of a majority of its members, is final and binding for all parties concerned.

Fifteenth. The cup will be exhibited at the yearly National Conventions of the P. A. of A., and arrangements ill be made to exhibit it also in the principal cities of the United States and Canada, for which purpose the kind co-operation of dealers is earnestly requested.

Sixteenth. The cup will be engraved at the expense of the donor with the name of the successful competitor and the year of his competition, immediately after the award has been made. The winner will then be entrusted with the custody of the cup for the ensuing year. He will be held responsible for its safekeeping, and shall return it to the donor for the next competition one week before the opening of the following National Convention, unless it becomes his full property in accordance with the terms of this competition. Further information and particulars can be secured from C. P. Goerz Optical Works, 52H Union Square, New York.

A New Catalogue

The well-known firm of George Murphy, Inc., of 52 East Ninth street, New York, have just issued a well-illustrated and carefully arranged catalogue of photographic supplies for 1906-1907. It is a book of nearly three hundred pages and lists everything that is likely to be wanted by either the amateur or professional photographer. As a reference book of photographic supplies it is of the greatest value and as a convenience in ordering it could hardly be improved. The cost of producing such a book must have been great and this enterprising firm are to be congratulated upon getting out such a good catalogue. No effort is made to bias the buyer in favor of their own line of goods which are also listed. This makes the catalogue almost encyclopedical in its scope, and for this reason of the greatest value to both the amateur and the professional. Photo-engravers' supplies are also listed, as are also a very complete line of chemicals for both the photographer and the process worker.

The June-July Sunset

The June-July number of the "Sunset" Magazine is a notable issue containing authentic accounts of the great San Francisco disaster by writers who experienced it. Joaquin Miller tells his impressions in a lyric poem of great beauty and force. C. S. Aiken's article, "San Francisco's Plight and Prospect," expresses the spirit of the people—the courage and spirit that cannot be downed. Edwin Emerson, Jr., tells how affairs in San Francisco were controlled by men who knew just what to do. His article, "Handling a Crisis," is an appreciation of the emergency work done in San Francisco. Both articles are well illustrated with half-tone engravings from protographs. E. H. Harriman's story of San Francisco's experience will be read with interest. Mr. Harriman was in the East when the earthquake occurred, and he hastened west to help. Alexander McAdie tells the scientific side of the earthquake, and his story is illustrated by siesmograph maps made at San Francisco and Tokio. Charles K. Field's poem, "The Chariot of the Gods," describes the sights seen in the streets during the fire. In contrast to the story of San Francisco is a description of Portland, Oregon, by Duncan Macdonald. E. T. Parsons follows this with a story of fishing for true rainbow trout in the High Sierra, and Frank Adams tells how he climbed up Mt. Whitney by the Lone Pine trail. Charles Warren Stoddard's story of the making of a Mission is the first of the series of old Mission idyls, which he has prepared for serial run in "Sunset" Magazine. They are as pleasing and chamnig in style as were his South Sea idyls. The "Capture of Papo Gato," by James Hopper, is an amusing story of the Philippines under the reign of the Yankee schoolmarm, and Charles G. Norris has laid the scene of his story in San Francisco during the great fire. "Sunset Cinders" includes personal incidents of the earthquake and those terrible days of storm and stress which followed April 18th. The cover design is up to the usual "Sunset" standard from a three-color drawing by Maynard Dixon.

The New Woolensack Catalogue

The Wollensak Optical Company, of Rochester, New York, has just sent us one of their new catalogues and it is indeed a beauty. Several of the illustrations are in colors, pasted in photographic style, adding wonderfully to the attractiveness of the booklet. A number of excellent shutters are listed and fully described, including their popular Skyshade shutter. An example of its work is shown in one of the reproductions, demonstrating its value in equalizing the exposure between a delicate sky and an ordinary foreground. Their fine line of lenses are listed and described together with a lot of valuable information on the subject of lenses in general. All in all the booklet is one that should be in the hands of every one of our readers and they will do well to act on our advice and send for a copy ere the edition is exhausted. Handsome as the booklet is, it will be sent free to those writing the company and making the request.

CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

PUBLISHED AT SAN FRANCISCO, CALIFORNIA

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FOREIGN AGENTS

New Zealand _____A. J. Watkins, Auckland
Kepthone, Prosser & Co., Ltd., Wellington

Australia____Harrington & Co., Ltd., Sydney
Baker & Rouse Proprietary, Ltd., Brisbane

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CAMERA WANTS

Advertisements under this heading will be charged for at the rate of fifty cents each insertion for twenty-five words or less. Each additional word, two cents extra.

Wanted—A fountain air brush; state condition and price. H. B., care Camera Craft.

Situation Wanted—Bromide enlarger desires situation, is also a good retoucher. Address Wm. Thunen, Cherokee, Calif.

For Sale Cheap—5x7 Century extension camera, 6 plate holders, case. Camera fitted with Goerz lens, Series 111, Sector shutter. J. D. Drake, Silverton, Or.

Post-Cards—Join the "Northwest Post-Card Union," Medford, Or. Twenty-five cents inserts your name and furnishes you with list of exchange. Next list August 1st.

Wanted—Amateurs having cameras (not Kodaks), 4x5 or any size larger, can earn $5.00 per week by taking pictures for us at home. Send stamp for particulars. Oval Portrait Co., Caxton Bldg., Chicago, Ill.

Wanted—A position by a sober Japanese, a good all-round man, experienced also carbon printing; bromide enlarging a specialty. J. S. 1617 Gough St., San Francisco, Cal.

Amateurs wanted to send me your favorite film or your own photograph and I will print them on 12 Velox postal cards. Photos or films returned with cards postpaid. L. H. Young, Needles, Cal.

Wanted—Studio in Southern California, Los Angeles or Pasadena preferred. State class and amount of trade with prices received for work. Name cash price. Address B. H. M., care Camera Craft.

For Sale—The leading photo studio in Central Washington; first-class and all new equipment; a good business; the best growing town in the West; population, 10,000; good reason for selling. Inquire Box 702, No. Yakima, Wash.

Wanted—Every amateur and professional photographer in the country to try our Carbon green developing paper. Send 25 cents for one dozen Carbon green and developer, or 50 cents for one dozen Carbon green and 8x10 Carbon green print, showing a view of the ruins in San Francisco. Artura Photo Paper Co., 1639 Fillmore St., San Francisco.

For Sale—Photo studio in one of the best coast towns in California. 15,000 inhabitants: have complete outfit for first class work: have one 8x10 camera: Goerz lens: one 30x30 camera: Collinear lens: this studio gets all the best trade at the highest prices: well equipped in every way: a chance for a good photographer to make good money. Price $1,700.00. Address Box 580, Eureka, Cal.

Eastman Kodak Company

ROCHESTER, N. Y., *The Kodak City.*

The 4A Folding Kodak

For pictures 4¼ x 6½

MAKES THE TAKING OF LARGE PICTURES A SIMPLE MATTER.

As easy to understand and operate as a Pocket Kodak yet possessing every requisite for serious work.

Price $35.00.

All Dealers.

Please Mention Camera Craft in Corresponding with Advertisers

CONDENSED INCHES.

An additional few inches of bellows on your Kodak would often times prove of great value permitting the photographing of the object at close range and on the largest possible scale ;

At the same time if the Kodak had these extra inches of bellows it wouldn't fold up so snug and be the compact little instrument that first won your heart.

There is a remedy, a way to get all the value of these additional inches without increasing the bellows length or bulk of your Kodak. Condensed inches would be a good name for this attachment ; it is simply a supplemental lens that slips on over the front of your regular lens. It is called the Kodak Portrait Attachment. While designed primarily to enable the Kodaker to produce large head and shoulder portraits it stands to reason that it will be equally valuable for photographing any small object at close range.

The Kodak Portrait Attachment will be found invaluable not only for portraiture but for the photographing of wild flowers and all natural history subjects too small to be photographed on a sufficiently large scale with the range of the ordinary instrument. The attachment is but little bulkier than the half dollar that will purchase it. Ask your dealer.

THE PASSING OF THE JUGGLER.

The ideal method of development is the one affording the highest percentage of good results with the least expenditure of effort.

The following extracts from an article by H. L. Fair in the *St. Louis and Canadian Photographer*, a professional journal, is a strong argument in favor of tank development :

"I believe I have good grounds for asserting that development by tank is the coming method and that the time will come when the most hardened juggler of plates and chemicals will realize that his "skill" is in vain, and that the automatic process is better, as far as results are concerned, as it is admittedly the easiest and quickest method now known."

"In the first place *it has been proved* that there is no possible way by which the gradations of a given exposure can be altered after the developer is once on and development started, except by the relative length of development."

"*The kind of negative is determined by exposure, the quality by the time and composition of development, and no altering of the developer alters the quality except as it alters the time.*"

"The tank will take care of any exposure correctly so it is within the limits of latitude of the plate."

"The tank can get detail out of a much shorter exposure than ordinary development can."

"If you are an honest sceptic, make an experiment or two—make the next lot of negatives in pairs, develop one set in the dark-room and tank-develop the other set. If you have honestly followed instructions there will be no question that the tank negatives are as good or better than the others,—"*they will be delicate beyond expression in the highlights, there will be no undue contrast and there will have been no long dark-room seance to get them.*"

Every day adds to the endorsements of tank development from both amateur and professional, if you are sceptical try the experiment, any Kodak dealer will willingly tank-develop a roll of film to prove the argument.

Please Mention Camera Craft in Corresponding with Advertisers

Eastman Kodak Company
ROCHESTER, N. Y., *The Kodak City.*

IN THE FAST CLASS.

KODAK FILMS RATED BY AN EXPERT WITH THE FASTEST PLATES MADE.

In the various editions of the *Photo Beacon Exposure Tables*, Eastman Film has been placed in the second column thus rating it at a lower speed than the Seed 27 plate.

This rating not being in accordance with our tests, we, to insure the proper rating in the new edition of the exposure tables being prepared, communicated with Mr. F. Dundas Todd, the publisher of the tables. He suggested, to definitely determine the matter, that a comparative test be made by Mr. R. Jas. Wallace, Photo Physicist at Yerkes Observatory, who possesses remarkably complete apparatus for testing the speed of photographic sensitive surfaces. We heard nothing further on the subject till we received the following from Mr. Todd.

"Mr. Wallace, of Yerkes Observatory, has just come into the office and handed me a very elaborate series of tables and a Hurter & Driffield curve concerning Seed Plate 27, emulsion No. 1029, and Eastman Film, emulsion No. 5205, both of which were bought here. The net result is that he finds the film to be the merest trifle slower than the plate, but the difference is so mighty little that they are the same. It is one on me and I accept the medicine."

Eastman Film is prepared to successfully take care of the harsh lightings and the multitude of unequal conditions constantly confronting the amateur, it is non-halation, orthochromatic to a high degree of sensitiveness, and possesses the speed of the fastest and highest grade portrait plate in the world. The twenty years of experience back of Eastman Film have not been spent in vain.

FILMS STAND

TROPICAL HEAT. IT ALL DEPENDS ON PROPER PROTECTION AND PROMPT DEVELOPMENT.

There have been ample proofs in the past few years that there is no difficulty in keeping film under the most trying conditions if reasonable precautions are only taken.

First, the film must be put up in air tight receptacles. An individual tin can, sealed with tire tape, is the most practical, convenient and inexpensive method.

Second, *the film must be promptly developed after exposure.* The point is that when the film is opened up for exposure the gelatine rapidly absorbs dampness from the water-laden atmosphere of the tropics and deterioration begins in a very short time.

We have heard three times within a few weeks from Mr. Charles J. Glidden, who is touring the world in an automobile, and each time he has spoken enthusiastically of his success with film. The first postal was from India, the next from China, and the last, under date of April 24th, from Nagasaki, Japan, says :

"Film received at various stations in the Orient as ordered. All in good condition. Sea and heat (120 in sun) has not damaged a single film and all exposures excellent.

Very truly yours,
CHARLES J. GLIDDEN."

If you intend Kodaking in the tropics, see that your film is properly packed.

Kodak cartridges will be packed in sealed tubes on request at 5 cents each.

Take along a Kodak Tank Developer to insure the means for proper development. If necessary, sea water may be used for all processes of development provided only that the final rinsing is in clean fresh water.

Perfect Balance

WITH

ORTHONON

Proper equalization of highlight and shadow. Correct color values.

STANDARD DRY PLATE DIVISION,

EASTMAN KODAK CO.

ROCHESTER, N. Y.

SAN FRANCISCO
PUBLIC LIBRARY

GEN. NEATO—APACHE
Copyrighted 1905
By E. S. CURTIS

Reproduced from gum print in colors
as described in Mr. Muhr's article

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CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

VOL. XIII. SAN FRANCISCO, CALIFORNIA AUGUST, 1906. No. 2

A Gum-Bichromate Process for Obtaining Colored Prints from a Single Negative

By A. F. Muhr

Several years ago when I had made my first gum print, a sketchy head in red chalk, it at once suggested the possibility of attaining color effects which might prove a revelation, though not simple enough to become commercially available. A long time elapsed before I could put my theories into practice, but I had so thoroughly thought out the details that my first attempt gave ample proof of the value of the suggestion, the correctness of my theory.

E. S. CURTIS By MUHR

When Mr. E. S. Curtis first displayed these pictures in Washington, D. C., and New York City, they excited great interest and much comment. What is, perhaps, most gratifying and speaks more favorably, they were bought at high prices by people who are known to be among the leading connoisseurs and collectors, upon the suggestion of some of the greatest art critics in the East. However, opinion was divided, for the artists on viewing them and detecting the product of the negative said: "It is not art." The photographers seeing the handiwork of the artist peeping through the print, said: "It is not photography." These pictures were thus

relegated to a nondescript position between the two. Very often this sign, S. becomes the true standard of value and causes others to inject the mercenary question: "What is there in it?" To these we say that the prices obtained were both encouraging and gratifying.

In producing these prints, the most important requisite in my estimation slight though it may be, is a knowledge of painting. I find that my early experience in sketching from nature, an accomplishment which has been, unfortunately, neglected for many years, is of inestimable value to me. In applying the sensitized pigments I find myself taking up first one, then the other color, as an artist takes them from his palette. Some knowledge of this kind will also enable one to form a clearer idea of the tone quality desired to be produced; one that will harmonize with the subject to be treated. It is in the production of tone-pictures, the Stimmungs-Bilder of the Germans, the symphonies and nocturnes of a Whistler, that this method lends itself admirably and gives the most pleasing and satisfactory results. To obtain these a simple palette, that is, one of but a few colors is necessary. A proper handling of the color scheme and judicious printing will enable a twilight effect to be easily obtained from a negative made at noon; the trees and shadows blending with the hills, while the last warm glow lingers in the darkening sky and casts its reflections on the waters in the foreground.

A. F. MUHR By CURTIS STUDIO

So much has been written on the rudiments and technique of gum-bichromatic printing of late that one is inclined to say that any old formula will answer admirably with which to form an acquaintanceship with this simple but interesting process.

My stock solutions are bichromate of potassium, one ounce in ten ounces of water; gum arabic in large, clear tears, two ounces in ten ounces of water. Finely ground colors to be obtained at any paint shop, complete the list. I have used tube water colors, but find that the dry colors give a more satisfactory result. The beginner should acquaint himself thoroughly with the relation which color and gum hold to his particular quality of negative, bearing in mind

that an excess of either produces contrast and, on the other hand, a minimum quantity will give more detail, better half-tones, and better gradations. Furthermore, the color itself is an important factor. Blue prints more rapidly than black; brown, red and yellow following in the order named. It is self-evident that the more pigment added to the emulsion the longer it will take the light to penetrate, hence care should be taken to add a sufficient excess of the quick

HEAD IN RED CHALK By A. F. MUHR
(The first Gum-Bichromate print ever made by the author)

printing pigment to compensate for those of a lower scale. A great deal of patience and perseverance are necessary and one must not be discouraged at failure in the beginning. Remember that one success is worth a barrelfull of failures.

Presupposing a knowledge of the values of the simple colors—blue, red and yellow—and the results of their being superimposed, we may coat the paper, proceeding somewhat in the manner of a rough sketch by "blocking in" the colors in bold masses conforming the outlines to the image of the negative. Before the gum sets, the next color must go where it belongs and so on until

the paper is covered. Use as broad a brush, or brushes, as may be consistant with the smaller masses of the subject. The detail, of course, is obtained from the negative in printing. The paper is then hung up to dry, which will take but a short time; an hour being ample. It may then be printed.

The colors are stirred carefully in equal parts of the gum and bichromate solutions, the quantity depending on the effect desired to be produced. Variations in the quantity of pigment used and the time of exposure change the effect of the print entirely. The paper is pinned to a board and should be coated or covered as rapidly as possible.

I have always used the paper without preparation, prefering the heavy, rough Whatman paper for our work. The shrinkage, especially in large work, is not detrimental. On the contrary, the slight fuzziness caused by the imperfect registration, blurs the outline and adds to the artistic quality. While on this subject, I will speak of register marks. I use both the corner mark and lines through the axis of the paper in both directions. These lines enable one to strike the comparitive center should the paper shrink more than usual.

As there is no visible image while printing, except in some of the thinner coatings of light colors, a photometer should be used. To make a test, coat a strip of paper with the emulsion and expose under the negative to be printed, at the same time exposing a strip of printing-out paper in the photometer, and so determine the correct exposure. When the print has been made, development may be proceeded with at once. In fact, it is more satisfactory to develop soon after printing as chemical action continues in the print after its removal from the frame and this would easily lead to wrong conclusions as to proper exposure. The development is the most interesting part of the process. A great deal depends on the preceding steps, but in development one comes to the making of the picture and the greatest care and patience must be exercised. Slide the print face downward into a tray of water and after a few minutes turn it over slowly and carefully. Do nothing violently, or everything may be spoiled. Let nothing touch the face of the print, and do not let water spatter on it. In five or ten minutes the high lights should be visible: in a half hour the middle tones should be out, and in an hour the print ought to be fully developed.

In the beginning of development, the water should be changed two or three times as the bichromate is discharged from the print. This is best accomplished by removing the print from one tray to another. Be in no hurry to use the brush, and do not become impatient. I have hung over a print for two hours and the result amply repaid me for the time and trouble. When the print shows the effect desired you may touch it sparingly with a brush. Have you ever watched the affectionate care with which an artist puts the finishing touches on his painting? Adding a high light here and a dark touch there by way of accentuation is all he does. That is all that is required in our work, a touch here and there. After prolonged development a two per cent alum bath is not required as the soluble bichromate has all been removed. Now hang up to dry.

The next coating is a combining or harmonizing coat. This is rather poor in color and applied quite thin with a broad brush all over the paper. Drop

black or lamp black, with a touch of magenta or prussian blue, or burnt umber, according to the effect desired, is added sparingly to the gum-bichromate. When dry, print and develop in the usual manner, but you may be more bold in the use of the brush. This should tone down all harsh lines left from the application of the colors in the first coating. The third and ultimate printing should be made with heavy emulsions, both as to color and gum, as they are to accentuate the heaviest shadows. The exposure should be rather short so that the deposit may be washed from all parts of the prints, except the shadows.

This is the method which I have worked out independently and successfully used. In the main, it corresponds with other methods; in the manipulation it is as different as the results are different. It is a process of great promise, wonderful possibilities and extreme fascination. It furnishes a medium which gratefully lends itself to the worker striving for artistic effects, giving such a temperment unlimited latitude, besides marking the result with the stamp of his own individuality.

Multiple Gum Printing

By H. D'Arcy Power, M. D.

The editor asks me to supplement the paper by Mr. Muhr with some remarks concerning my own experience and methods in multiple gum printing. In complying with the request, I only do so in order to draw the attention of gum workers to a process that adds new powers of expression to the most plastic of all photographic printing processes, and to direct the seekers after knowledge to more ample sources of information.

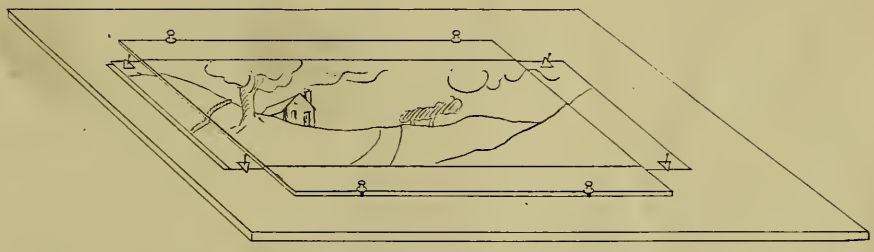
Multiple gum printing is practical, for several distinct ends. In its simplest form it is used to introduce clouds or a means of composite printing—secondly it is used to produce pictures in color, either arbitrary combinations such as brown and black, brown and pink or brown and blue, whereby certain general effects of nature are suggested, or by using many succesive printings to attempt true and full color schemes, or by the use of three negatives exposed under the proper light filters to make bichrome prints. Thirdly, it is of the greatest value as a means of lengthening the scale of gradation and of giving an impression of body so often lacking in gum prints. Concerning these different purposes I have practical knowledge of its great value in introducing clouds and for combination printing. Trichrome printing in gum is assuming much importance in Europe, and providing the right pigments are used there is no reason why it should not give prints of high quality. Full color prints from a single negative have been hung at the European salons, and those of Major Puyo are said to have been almost as good as water color paintings; but it is doubtful whether any genuine success can come of such means. Two color prints, if the colors be well chosen, may give very beautiful results, but I would advise the worker to avoid contrasting tints. Brown and black, or two

different browns, black or dark brown with Payne's grey, brown Madder and Payne's grey, or similar combinations of tertiarica give the best effects. Mr. Curtis' studios are the best evidences of the value of this use of multiple gum. Nevertheless, a major portion of the workers of the process use it to gain tonality rather than color. Whether it is necessary to employ it is an open question. M. Demachy, whose gum work has never been excelled, or on the whole equaled, does not employ it, and maintains that single printing in the proper hands gives better results than the multiple method, but all gum workers have not the command of technique of M. Demachy and it is undeniable that a long scale of tones can be more easily, if not as perfectly gained by the multiple method. Furthermore, the extreme care in equality of coating and in development is not called for as in single gum. Against it must be placed the length of time required by the repetitions of coating, printing and developing; the loss of detail that almost always accompanies a lack of exact registration, and an alteration of the character of the print whereby, if we may make a comparison with the work of the brush, it ceases to resemble a water color and approaches the quality of an oil painting.

Now as to technique; be it remembered that while a multiple print is simply an ordinary gum print recoated, printed to exact register and developed anew, twice, thrice, or as often as may be necessary, yet the method of performing these processes is not the same for every negative or exactly that of the simple printing method. For example, the coating is usually thinner than in single printing and may have to be varied in the different coatings in order to obtain a given effect. It may have to be coated heavily in one coat to obtain strength in the shadows, whereas in another instance the coating may be applied thin to obtain some particular detail in the high lights or that the coating may act as a glazing. For details and examples I would refer the reader to the excellent little book on multiple gum by Creuys Richards, published by Dawbarn & Ward, 6 Farrington Ave., London, E. C.

The usual proceedure is to coat thinly. print either for detail in the shadows or high lights according to the character of the negative and the effect required and then develop and fix. Often when the first printing is for detail in the high lights it may be necessary to remove the pigment from the shadows with the brush. When dry the print is again pigmented, printed to exact register and again developed. possibly on this occasion for shadow detail. The difficulty usually met with by the beginner is in effecting registration. All forms of paper when successively wetted and dried undergo shrinkage and distortion so that in subsequent printings the positive cannot be made to overlie the same parts of the negative it occupied during the first printing. This difficulty is overcome in various ways. Some workers fasten the paper on to a sheet of zinc by means of rubber tissue and heat, whereby its change in form when wet is checked. With large sheets of paper this is almost a necessity. Others, working with small negatives, neglect this shrinkage and its resulting blurring, and holding print and negative towards the light move one over the other until they coincide or "register." With glass negatives the printing must be done on a drawing board, fixed in the manner rendered familiar by the writings of H. Horsley Hinton.

Personally, I use films on paper negatives and the method I employ is simple and has given me good results. First, I take the paper to be used for multiple gum and immerse it in warm water and after two hours hang it up to dry. This I repeat several times, whenever I think of it or have nothing else to do. The result is to take the contractility out of the fibers so that the paper no longer changes shape when wetted. A similar result may be obtained, and although the surface is slightly changed thereby, by dipping the paper in a celluloid varnish (commercially known as cold lacquer.) To obtain registration I take some thin sheet zinc and cut it into pieces of a quarter of an inch wide and nearly twice as long, narrow at the middle like the outline of a letter X. Four of these are bent over to form clips and placed near each negative as shown in the illustration. Printing is effected by placing the pigmented paper on a smooth flat board covered with two sheets of blotting paper. The negative is laid thereon and over both is placed a sheet of plate glass a trifle smaller than the negative and held down by four Kodak pins. Four other pins are also placed that they pierce the zinc tabs or clips and the underlying printing paper. The paper should be marked with a cross to indicate the top. We now have the following arrangement:



When a subsequent printing has to be done it is an easy matter to find the four holes in both negative and positive and pass the pins through both in the same relation. The object of using the zinc tabs is to prevent wearing and fraying the holes by repeated use. If necessary, similar tabs may be clamped on to the print. Working in this way I have found no difficulty in making 11x14 prints with a minimum of trouble. Much has been written on multiple gum in the European photographic journals and in Germany it has become the usual method of working and the favorite medium of that country's best known workers. I can strongly advise those acquainted with single gum printing to give the multiple process a trial, but it is not a method for the beginner.

Mr. Turner's Article

Mr. Turner's article on Photographic Chemistry was to have been continued in this number and although in type, it was crowded out through the space available not being of the proper size. It will appear in our next issue and we trust continue to completion without further interruption. The fault is not with Mr. Turner and we trust our readers will pardon us for the break which will no doubt prove its own justification for our making an exception in its favor in the face of our strong dislike of continued or serial articles.

MISS JESSIE RINGEN
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By J. C. STRAUSS

Photography at Sea

By Capt. William Lyons, S. S. Texan

With Illustrations by the Author

Calling in at Camera Craft office to renew my subscription, I was requested to send the editor a few of my prints and later in acknowledging the receipt of them, Mr. Clute asked that I give the readers of his magazine an account of my method and a description of the facilities which I employed. The letter reached me at Honolulu where my hands were quite full of other matters; fire having broken out on board ship the day after our arrival and it was four days before it could be extinguished, although the vessel was unharmed. Leaving there with over eleven thousand tons of sugar, it was not until we reached Coronel Chili, that a letter could be dispatched.

WHERE MY PHOTOGRAPHIC WORK IS DONE
Pinhole Photograph—30 seconds exposure

Mr. Clute advises me that he would prefer to use such pictures as I have sent him from time to time in the form of the popular illustrated post cards such as I make from my negatives for the gratification of my friends, and I would explain that while I often make enlargements from my negatives and also use my 5x7 camera quite extensively, the making and sending of these post cards seems to occupy the major portion of the time that I devote to photography and for that reason perhaps, pictures trimmed from them will be more characteristic of my work.

All my photographic work is done in my room, a good idea of which can be obtained from the accompanying illustration showing one side of it and the wheel house directly forward, the door of which is shown open behind the stair near the left. The width of the room is a little greater than the side as shown and the circular window being twelve inches in diameter, the size can be easily estimated. This is divided into a bed room and chart room, the latter being the smaller of the two with a door opening into the wheel room. A door connects the two, the chart room and bed room and both are supplied with a door and window at the side as shown, as well as with like windows, one in the end of each room, opposite the end at which the wheel house is situated. Closing the door from my room into the chart room, I have but to insert two circular pieces of dark cardboard and I have a perfect dark room should I wish one during daylight. A sofa extending from the door to the corner and just below the window shown, serves to hold trays and the like when developing. At the end of this sofa furthest from the door is a wash stand and

TOMB OF ROYALTY, HAWAII

ON THE PASIG RIVER, MANILA

beside it a locker containing the bottles of chemicals and the like. Beneath the corresponding window in the chart room is a large chart table and this is where my enlargements are made. It is easy to see that the arrangement is far from being inconvenient.

As a rule I wait until night before doing my developing. For washing either plates, film or paper, I use my bath tub where I have a generous supply of running salt water. I have been using this salt water for over four years with entire satisfaction by giving a finishing wash in three changes of fresh water to remove the salt. While there is plenty of fresh water on board the salt water is more convenient to use because running. My printing is mostly

GLACIER AT FIELDS ANCHORAGE, STRAITS OF MAGELLAN
Mountains are 3500 feet high. Taken in midsummer (January)

done on developing papers, Astro, Velox and Azo. I paste a piece of red paper over the window and then have plenty of light to fill the frames in comfort. I use six printing frames and when they are filled, raise the window and hook it up and then make the half dozen exposures before closing it down again. The prints are developed by the light from a sixteen candle power red incandescent light. Daylight allows me to work faster and it permits me to employ the large amount of time on my hands while at sea, we often being at sea for from twenty-four to thirty days.

A great part of our time being spent in the tropics, recourse must be had to the ice plant which is carried on board, giving cool water at all times. Out of the tropics the salt water is cool enough and gives no trouble.

All my enlarging is done when out of the Tropics, when the water is cool. I like it for washing down to about sixty degrees. I tried it in the Tropics one time with the result that all the gelatine emulsion came off of the paper. Aside from this I have had the best of results in enlarging, using my 5x7 Premo camera fitted with a Goerz lens and Sector shutter. The camera with the negative in position is placed in the window in the chart room and all extraneous light shut out. The image is focused on a frame covered with white paper after which the bromide paper is pinned up and the exposure made requiring

RAINBOW FALLS, HILO

from three to sixty seconds, depending upon the light, density of the negative and the stop used. As the house is on the upper deck and the window five feet from the deck, there is nothing to obstruct the light. The exposed paper is taken into my room, developed and fixed and then taken to the bath room for a wash of an hour or more, followed by four changes of fresh water to remove the salt.

All in all, photography not only furnishes me with very enjoyable employment for spare time but it enables me to record the many interesting scenes and occurrences that otherwise would be but memory pictures which I could not so readily share with my friends at a distance. Although my photographic work is carried on at some disadvantage it is surprising to find how easily one can adapt himself and his methods to conditions that are unavoidable.

RESIDENCE AT LOTO, CHILI

SCHOONER SINGLETON PALMER

MINER'S CHILDREN AT CORONEL, CHILI

KAISER WILHELM DER GROSSE

FAMILY OF PUPPIES BORN ON S.S. TEXAN

SCENE NEAR HILO, HAWAII

MOUNTAINS OF WALUKU, MAUI

A DAUGHTER OF MANILA

particularly at this time when so many of the photographic processes have been so simplified. I read a number of the best photographic magazines and while I do not aspire to the making of any striking discoveries or the earning of a reputation as an exponent of the art possibilities of photography, I find time to experiment along many lines and a number of my more serious productions in the form of carefully made enlargements, have received praise from those whose opinions I feel can be valued. The picture showing the exterior of my room is an example of what can be done in the way of pin-hole work. The "pin-hole" used being a hole made in an ordinary piece of card with one of the ordinary pins we all find so useful on our dressers. Thirty seconds exposure was given on a Cramer Crown plate. The same view was made at the same time with my Goerz series III stopped down to F-16, giving one-eleventh second on a Seed L Ortho plate. While the definition is of course perfect in the lens made negative and the sky better rendered than would have been the case with a plain plate in the intense sunlight, the two prints are practically identical as to range of densities and gradation.

AN OUT-DOOR GROUP By SAVANNAH, VICTORIA, B. C.

Readiag from left to right, those standing are: Capt. W. F. S. Wyndham, Equerry to H. R. H. General Sir Thomas Kelly-Kenny, G.C.B., Col. Arthur Davidson, C.V.O., C.B. and Mr. M. W Lampson. Seated are: Lord Redesdale, K. C.V.O., C.B., Prince Arthur of Connaught and Admiral Sir Edward Seymour, G.C.B., O.M.

A PROFILE
By J. C. STRAUSS

Still Life for Amateurs

By William Seltzer Rice

With Illustrations by the Author

It is really surprising how few amateurs give any thought or time to the study of still life, when nature offers so much fascinating material with which to experiment. The combination of natural forms, as fruits, flowers, shells, vegetables, with inanimate forms as pottery or objects of industrial art, offers opportunities to the photographer, who may revel in this delightful field which is not overcrowded.

Probably one reason why still life groups are not more frequently photographed, is that most amateurs use cameras of insufficient bellow's length to enable them to secure pictures of the objects of a fairly good size upon the plate.

In order to make a success of still life, it is important then, that the camera should be one of the modern long focus type with sufficient bellows to enable the worker to get close enough to the object, and yet obtain a good sharp image upon the ground glass. This point having been settled, the next ones to consider are the subject, kind of plates to use, the length of exposure, stop, time of day, light and shade and composition.

As composition is directly related to our subject to be represented, we should know at the outset some of its elementary principles. One of the greatest helps towards the understanding of these is to rule with pencil two lines through the middle of the ground glass, at right angles to each other. These will give us the exact center of our 4x5 or 5x7 space both vertically and horizontally.

In viewing the subject upon the ground glass, suppose we have for study an arrangement like the picture entitled "Peaches and Wine." Pay particular attention that the main objects of interest do not fall exactly on either of these two lines, nor exactly in the center of the four equal spaces which they divide. The back table edge should not fall upon the middle horizontal line of the ruled ground glass, but either above or below it. Let the tallest object be either to the right or left of the middle vertical line, but not square in the center of the adjoining spaces. The folds in the drapery help, somewhat, to break the vertical line, and thus aid in giving variety. Plush, velvet or even canton flannel serve very nicely for backgrounds.

As all the subjects are light in color, we shall choose a dark background in order to gain contract. If you have a polished table to reflect your group, you may obtain charming effects. A similar effect may be produced by using a dull surface table and lay upon it a pane of window glass; or if an entirely different effect is desired, burlap or Chinese matting make very effective backgrounds, and foregrounds as well. It is not advisable to place rear objects at too great a distance from those in front, as they will not only be out of focus, but the perspective is liable to be distorted. This is noticeably true in cameras fitted with short focus lenses.

When everything is arranged in a pleasing, and not a stiff manner, let us shut off the light on all but one side, (preferably the left) by lowering the

THE VINTAGE

LOGANBERRIES

PEACHES AND WINE

window shades. Place the group a short distance away from the window; and if the shadows on the right side of the objects appear too dark, or too dense, you may help them out somewhat by placing a sheet of white cardboard nearby, at such an angle that it will reflect a trifle of light into the denser shadows, but not too much of the roundness of the objects will be sacrificed.

All details arranged, the camera, of course, is set upon a table or tripod, and the image has been examined upon the ground glass and the size has been found satisfactory we set the shutter for a time exposure, and stop down to gain sufficient depth of focus. The length of exposure will depend entirely upon the stop used, the kind of plate, the time of day and the kind of light outdoors.

On a bright clear day towards noon, with a stop 62, medium Isochromatic Plates, exposures of three minutes for light subjects and from three to five for dark ones, were successful. When a color screen, or ray filter is used to correct the color values of objects containing much blue, violet or cool, bluish gray, the exposure should be lengthened three or four times.

There is scarcely a more fascinating branch of the art photographic than that which deals with the study of various kinds of fruits. These, of course, are most interesting when photographed in their natural positions on the growing tree or shrub, but unfortunately, Dame Nature places many difficulties in the way of our successful accomplishment of this modus operandi. There is always that more or less impossible task of securing a suitable background,

PINEAPPLES AND BANANAS

and then should we master this problem, we must still be on guard against that ever present enemy, the wind.

Snapshots of fruit or flowers never satisfy the student of botany nor the publishers of garden magazines, moreover, a snapshot is out of the question when we want an almost full size picture of the original subject, which must have sufficient detail and sharpness to reproduce in half-tone satisfactorily. Of course from a purely pictorial standpoint, this sharpness is not so desirable. But even then one is compelled to extend the bellows so far, that the stop marked 16 works in reality at an aperture of 32, and requires about four times the exposure that would be needed if the photograph could be made from a considerable distance. Therefore, the easiest and most practical way is to collect specimens for indoor photography. Gather the branches some hours before making the exposure, place in jars of water in a cool place, thus the stems will gradually fill, and there will be less danger of the leaves and sprays drooping or wilting during the long time exposure.

Indoors one may choose any kind and color of a background that he wishes, this too, is a strong argument in favor of the aforesaid method. The lighting may be better controlled, also, thus producing beautiful lights and shadows giving roundness and modeling qualities so desirable to the photographer in this particular line of subject. Cards used for picture mats (22 in. x 28 in. in size) ranging from pure white through grays to black, are just the thing to use; and if one is in doubt as to how each will photograph all that is

necessary is to tack the cards in a row on the wall and photograph them together. Thus one can make comparisons more easily, and save much perplexing guesswork.

The background should be placed at some distance back of the models, in order that sharp, objectionable and confusing shadows shall not fall upon it. Sometimes the merest suggestion of a shadow falling upon the background is not only pleasing, but lends variety to an otherwise plain surface.

A little thought and attention given to the subject of still life will do wonders towards cultivating the artistic eye in the home, and it is not always the many beautiful costly things that only the rich can own, that make the best subjects for still life representation. A cluster of La France roses in a tall cut glass vase, are not more beautiful to the artist than a spray of wild sweet briar trailing from an old Chinese ginger jar. So it is with many other things which we have unkindly despised or overlooked. An artist sees beauty in the common objects of every day life and delights in expressing to others what he has seen. If you know how to find beauty in such common things, and if you are able to create something beautiful yourself, how much you will enjoy creating it and how useful to the world you will become!

In one of Murillo's pictures in the Louvre, he shows the interior of a convent kitchen, but doing the work there are, not mortals in old dresses but beautiful white winged angels. One serenely puts the kettle on the fire to boil, and one is lifting a pail of water with heavenly grace, and one is at the kitchen dresser reaching up for plates. As the painter puts it to you on his canvas all are so busy and working with such a will, and so refining the work as they do it, that somehow one forgets that pans are pans, and pots, pots and only think of the angels and how very natural and beautiful common everyday work is.

The group of oranges, bananas, pineapples and kitchen utensils was gotten together in a few minutes, all the subjects contained therein were seen on the kitchen table, but of course not arranged exactly in the position they occupy in the group shown in my photograph. Accidental groupings do not always agree with the rules of good composition, although very often a slight modification of any accidental grouping may produce very good compositions.

An old splint basket of peaches, grapes or apples with a few leaves adroitly placed among the fruit adds greatly to the effect. In selecting baskets, vases or receptacles for fruit or flowers, try to avoid anything highly decorated, as it detracts from the object which is placed inside of it. Plain earthenware jars either glazed or unglazed, are always to be preferred to cut glass or ornamental pottery.

Once color photography becomes universally practiced, still life subjects will perhaps become more popular among amateurs who until then must depend on good light and shade effects, color values and textures, in order to make pictures that are worth the while, not only for commercial purposes as advertisements, but for pictorial effects made purely for Art's sake.

The Demonstrator Talks

By Charles S. Ogilvie

Stains on Developing Paper

A REFUGEE'S HOME By PAUL OESTING

REQUESTS for information took me to a small town recently, a town which boasted but two photographers, both of them using developing papers. Both had the same trouble; brown stains. Where the difference came in was in one claiming that the paper was at fault while the other knew that the trouble was in the developer. They both agreed that Rodinal was a non-staining developer and that a good sample of the best heavy linen ledger paper could not be faulty. Using the two I showed them that long development and carelessness in failing to keep the prints covered with solution while developing and free from confined air bubbles in the fixing bath, would give the same stains. Too short an exposure demands long development and unless the print is kept well from the air by a complete immersion in the developer during development, oxidization sets in and stains will result. When the prints go into the fixing bath it is often the case that a large bubble of confined air adheres to the face and this air causes the developer in that part of the print to stain the emulsion before the fixing bath can gradually work in and accomplish its mission. If the fixing bath is weak and exhausted, the same oxidization will take place for the reason that too long a time is required for the fixing to become completed.

The Englishman's Half-Plate

I am far from being an anglo-maniac but I have often regretted the fact that none of our popular and convenient cameras was made to give a picture 4 1-4 by 6 1-2 inches in size. That particular size and shadow has always appealed to me very strongly. Not only this but the ordinary 5x7 lens would seem to be so much better fitted to that slightly smaller size than it is to the camera to which it is fitted regularly. There would be less danger of it failing to cover properly and the focal length being longer in proportion to the plate, the perspective of the pictures would be better. Just as I was about making

up my mind that I would ask some maker to turn me out a special size, along comes this new 4A Folding Kodak which is just the thing. Although it is a film camera, an adapter that can be placed in position in a moment allows one to use plates; and with a portrait attachment and the extension focusing attachment, the camera can be used up to a distance of three and one-half feet, making portraits limited in size only by the dimensions of the plate or film. The regular 5x7 lens is fitted and there can be no doubt but what this will prove the most popular instrument that the Kodak people have so far gotten out.

Something Different

I was in a stock house recently and while waiting for a word with the proprietor, observed that three panoramic views about 5x30 were sold in rapid succession. Examining one I found that they were contact prints and evidently from a very fine negative. The name in the corner being new to me I inquired of the salesman as to the maker's identity and learned that he was one of the semi-professionals of the town who had made several hundred dollars on the one negative alone. He did this simply by offering the public something different from the stock views carried by the professionals. The negative was made with one of the Cirkut Panoramic attachments made by the Century Camera Company. It fits any ordinary 5x7 plate camera with a reversible back. It uses the daylight catridge film and will make a negative any length up to six feet. The film can be any width up to six and one-half inches. The beauty of the attachment lies in the fact that one is not confined to the use of a short focus lens as is the case on the ordinary swinging lens and stationary plate arrangement. The long extension of the camera with which it is used can be employed with a correspondingly increased focal length of lens, thus eliminating all danger of distortion. It is simply an attachment that converts the ordinary camera into a perfect panoramic outfit working in connection with the special tripod and top that is furnished. This amateur that I was talking about has had commissions from business men in several nearby towns to supply them with local views and he is kept busy filling the demand for prints. In one case he found it necessary to have constructed a temporary tower some sixty feet high in order to get the view of the town from the right point, which happened to be too low to escape the tops of some buildings which cut off a portion of the view. Despite the cost of this construction, he is assured returns in sales enough to still leave him a handsome profit over his expenditures. The same kind of work would no doubt prove profitable to a large number of photographers if they would but be the first in the field.

Post Cards of Local Views

In my travels about the country I find on sale at almost every stationery store, a supply of the popular view post cards. The stock sometimes contains local views and sometimes it does not. If local views are included, the chances are that they are of the poorest quality and their poor appearance is emphasized by the good quality of the regular lines. This is all wrong. Of course it may

not be practical to order several thousand of each of the few subjects composing the local set from the makers of the colored collotype cards in Germany, but the local card should compare favorably with those originating in the larger cities which are produced by the half-tone process. Any enterprising photographer could undertake the work of issuing a series that would be a good seller and a source of profit to himself, if he would but go about the matter in the right way. Done rightly and the cards will be a success. The first thing is to secure a set of good negatives of full detail and good printing quality. Judgment should be used in the selection of the subjects. One must of course have a view showing the whole or a greater portion of the town. Be sure that this view is the best obtainable or else another worker may produce a better one and materially injure your sales. The main point is to see that the foreground is pleasing. Do not hesitate to go to some expense in this matter even if it involves, as it did for a worker I know, the erection of a rough scaffolding in order to secure the right height at the desired point. In all the views, work for interesting foregrounds. The right kind of a half-tone shop will so make the blocks that these foregrounds are stronger in tone and in that way throw back the distance and secure a perspective in the reproductions that will make them much more effective than they would be otherwise. Then give the half-tone men a chance. If possible, make all the views so that they will all require the same amount of reduction in size in order that he may photograph them all at the same time. Advise him that the blocks are to be used for printing cards and if possible, send him a sample of the stock that your printer will use. Give him good copy on smooth Velox, all of the same relative size and the same tone and he will give you blocks that will print alike and print much better than if he is in doubt whether you wish to run them on soft newspaper with cheap ink or on good cards with high grade ink. Ask your printer how many he can run at a time on the press best suited to the work, and order blocks accordingly. If four, order a series of eight or a dozen. This will make the printing cheaper. Blocks to print in one color like black or brown, are the simplest. Next comes an effect produced by running a flat tint over the first printing, this requiring only a solid tint block in addition to the regular cut. This same original cut run twice, the last time with a glossy ink, will often give fine results. Still better effects are secured by etching out the high lights of the picture in the flat tint block and then running it as suggested. Next in order comes the effect secured by running two half-tone blocks in two different colors as was done in the frontispieces for the last two issues. Most of the other CAMERA CRAFT frontispieces were produced as suggested above, by a second impression with a tint block or the same cut, using different ink. The best process is the three color half-tone such as is used in reproducing the fine Indian head that will be used in this issue. This is expensive for the reason that the half-tone maker must make three negatives, using color sensitive plates and ray filters, and the three negatives must register accurately. The three blocks comprising the set will cost double or more the price of three ordinary blocks. You will have to pay your printer for three printings instead of one or two as in the simpler styles. However, such a set of blocks for any

particular local view or even for a series of say six, could be made profitable if carefully handled and loaned out to lodges, business houses and the like. Programs of societies are often printed in several colors on good stock and the view in three colors could be run at the same time without additional cost. Such a set of blocks would make excellent calendars for advertising purposes. Run on the back of hard surfaced blotters in connection with a calendar for one or two months, another good piece of advertising could be gotten out. A candy firm in a small city which I visit, uses such views in colors on their candy boxes and finds that it stimulates their business wonderfully. By placing the blocks at the disposal of such users and securing the co-operation of the printer in doing it, one could no doubt rent the blocks for more than their original cost, within the year. The editor of CAMERA CRAFT I am sure would be more than willing to assist or advise any photographer desirous of undertaking some such line, not only as to the most advisible style but as to where the suitable blocks could be obtained. The magazine certainly shows some very nice work of this class and one interested would have but to inquire concerning any particular effect that he might like.

A TRIAL SPIN
By J. WILLIAMS

Natural Poses in Genre Work

By J. Williams

With Illustrations by the Author

THE LEISURE HOUR

OBTAINING a natural pose when dealing with subjects of every-day life, particularly when using our friends or other untrained models as subjects, is, as a rule, a very difficult matter to the inexperienced worker and by no means an easy one for the photographer who has given such work a deal of thought and study. It is apparent that in the realm of general work lies the most ready opportunity for securing success were it not for this one great difficulty. A look at the pictures shown at any of the exhibitions or even the observation of those reproduced in the magazines will prove that in proportion to the number offered and in the degree of technichal excellence, pictures which portray the homely, every-day scenes that are enacted by those about us and which appeal to all alike on account of the touch of human interest which the average work of the photographer seems to lack woefully, score much better than landscapes and the like.

With this little article I am sending three of my own efforts, selected as examples that will best illustrate my remarks, as the subjects in each case were really most trying ones on account of their persistent self consciousness. The first, "The Leisure Hour," hardly requires the title. The subject was advised that I would be some time in getting everything ready as I wished to study the effect of various exposures on the ground glass and would let him know when he was to give me his cooperation. The result was that through my being all ready with the exception of final focusing, the picture was made while he was engaged in reading and entirely unaware of my purpose at the time the exposure was made. The resultant picture is at least strong in the qualities of naturalness, simplicity and effectiveness. In order to conceal my lack of veracity that I might have the confidence of my model for further efforts on another day, an exposure was made a few minutes later after calling his attention to the fact that I was ready and desired him to remain still for a moment. Although the pose of the body was not changed in the least, the expression of self consciousness and slight stiffening of the muscles resulted in a portrait entirely different and one that in no way compared with the first exposure.

The next picture, "The Angler," is typical of a more common class of subjects that may be available and although difficulties are present, they may be

overcome by the introduction of a little imagination or suggestion. One may feel at times that he is intruding just as I did when I happened upon this son of the soil quietly fishing on the bank of the river; but the chance of a picture was too good to be missed. Suppressing any trace of embarassment that I may have felt on this point I approached my victim and chumming up, made his acquaintance. He suggested that I should snap his next catch and with a view of taking him off his guard, I agreed. Casting in, we awaited results. The pose adopted by him was both strained and wooden and the presence of the camera was painfully apparent in the attitude assumed. To secure a more natural and unconscious pose, one that would be more in keeping with the feeling of the scene and with the subject interested only in the pastime in which he was engaged, was my object. To accomplish this I suggested that the bait might require replenishing, which, by the way proved correct. Thrown off his guard he became so absorbed in his work as to produce a perfectly natural effect. The shutter was released and while the result is perhaps not the picture the model expected, it is as I saw it and as I wished to have it seen by others. Thus, by a mere suggestion a natural pose was obtained.

THE ANGLER

Using two figures as in "A Trial Spin," makes the work a little more difficult but by following the same plan of keeping the models unconscious of the exposure, using a little imagination and patience, and becoming interested in their pursuits; troubles will disappear, and what may have seemed a hopeless task in the beginning, will, in many cases, turn out a success when the results are at last translated into a print. My desire in writing this brief description of my own work and the methods employed, are that others may be encouraged to take up this most fascinating branch of photography. Landscape work is liable to pall upon the camera enthusiast and his interest wanes. Portraiture is a little too trying upon the patience of ones friends who are rarely in sympathy with the aims of the photographer. Many special lines of work are open but the search for subjects of a particular kind is sometimes most discouraging.

On the other hand the worker who makes the study of such simple subjects as I have suggested has an unlimited field and one that is always at hand. He will find abundant opportunities for exercising his constantly increasing skill and the results will always have an interest for his friends as well as serving as a constant stimulus towards further efforts in the same direction.

Winter Scenes

By B. F. Loomis

In the early spring before the fire and earthquake, I had sent a batch of prints to Camera Craft, a portion of which, the editor told me, would soon come to print. Then the fire came and Camera Craft, pictures and all went up in smoke. The pictures were a few of our choice winter scenes. This second lot of pictures goes on a little out of season, yet it may be some relief to those who have seen nothing but fire, debris, smoke and cinders for the past few months to rest their eyes on a few cool scenes like these.

I cannot claim to be an artistic photographer or even a professional, but with several years' experience in making views in the mountains I may be able to offer a few suggestions which may be of service to other amateurs like myself.

A cloudy day is always preferable for making views in the woods, whether in winter or summer; for the sun, in shining through the trees, makes great white patches on the ground which are seldom comely in any picture. But on a cloudy day the light is very soft, and there are no harsh shadows to contend with, but it requires a much longer exposure to make the picture.

THE SHINGLETOWN PLATEAU
The Coast Range eighty miles distant

A No. 32 stop, and from two to four seconds exposure at mid-day will make a good picture in the pine woods in summer unless the foliage is very dense. In winter the light afforded by the sun is much slower than in summer, but if everything is covered with snow the additional light afforded by the white snow makes it about equal to an ordinary summer view so far as the matter of exposure is concerned.

But if one goes out into the open country in bright sunlight when the snow is heavy on the ground and everything is a glare of white light so that one is forced to screw up the eyes and keep them almost shut to keep out the excess of light, then all is changed. Nothing but a snapshot will be of service unless a very small stop is employed and usually a color screen or ray filter must be used to produce good results, especially if the view is taken at long range.

My view of "The Shingletown Plateau" showing the Coast Range in the distance, about eighty miles away, cost me about three dozen dry plates and eight or ten climbs up the mountain to a suitable place from which the picture might be taken, in making the experiments. The picture here presented is the best one of the lot, yet I do not call it a success. It was made on a Cramer's Medium Iso plate, with a Corbett's Orthochromatic Color Screen, using No. 128 stop, and an exposure of two seconds in bright sunlight at mid-day. There was a very thin haze of clouds which appears very heavy in the picture. If anyone can suggest anything better I would be pleased to hear from them.

"Our Home in Winter" was made early in the morning on a cloudy day using a No. 32 stop and two seconds exposure; using a Seed's 26X plate, and without any color screen.

The view of "Our Gate" requires a trifle longer exposure than the one of our home, on account of its being heavier foliage. The editor told me that

OUR HOME IN WINTER

THE GATE TO THE LANE

THE WOODS IN WINTER

this is not an artistic picture, but it would be interesting and instructive if he would explain why.

"The Woods in Winter" is taken more for its value as a portrayal of the timber than for its artistic effect. It would be more effective if taken horizontally, but in being so taken it would lose much of the timber effect, in my opinion.

A view taken toward the sun with the unaided lens, when there is a glare of reflected sun-light on the snow in the foreground, seems to produce a "reversed negative." That is, where the excess of light is in the view, that part will appear dark in the finished picture. This phenomenon is entirely overcome by the use of a color screen.

The Northwest Convention

This issue will come off the press at a rather inopportune time for the reason that it will be too late to advertise the Spokane gathering or aid it in any way and at the same time it will go to press entirely too early to allow us by any possible means to report its success. The success is assured. Our advertising its strong claims to the support of the photographers in the Northwest is unnecessary. Simply wait for our report in the next issue and then, if you were so unfortunate as to have missed the gathering, resolve that you will never do it again.

THE PICTURE BOOK
By J. C. STRAUSS

CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

FAYETTE J. CLUTE, Editor and Proprietor

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Our Apologies and a Correction

The fine picture, "Moonrise," on page 244 of our last issue should have been credited to W. H. Porterfield instead of C. Yarnell Abbott, as was done. The article beginning on the page preceeding should also have been credited the same as the picture, to Mr. Porterfield. The article just preceding this last, the one starting on page 237, should have been credited to Mr. Abbott instead of Mr. Porterfield. It has been a long time since this magazine has had to make a correction of this kind and we trust that both gentlemen and our readers will pardon the mistakes which were caused by the disadvantages under which the magazine is being gotten out. Cuts were made in Rochester and Denver while the composition, make-up, presswork, folding and binding was the work of three different shops in Sacramento. With the editorial and business office here in San Francisco it is hard to avoid mistakes.

New Local Stock Houses

Several new business enterprises in the way of retail photographic stores are a feature of the New San Francisco. The announcement of one of them graces our first inside page. One member of the firm has long been identified with the trade, and the other, although new in the photographic line, is widely and favorably known to a large portion of our citizens. The success of this new firm is assured, particularly as they realize fully the advantages of CAMERA CRAFT publicity. Before the new store was finished and before stocks were all ordered, the most desirable space available in this magazine was demanded. Our other new dealers will no doubt exploit their claims to the patronage of CAMERA CRAFT readers in early issues.

Mr. Bacon with Hirsch & Kaiser

W. O. Bacon, who has been identified for so many years with the retail photographic trade, both as a dealer and later with Mr. Waters, has associated himself with the popular firm of Hirsch & Kaiser. Mr. Bacon is widely known to the photographers on this Coast and is justly popular with all who have been so fortunate as to enjoy a place on his wide list of acquaintances. He will be pleased to greet his old friends at the popular Fillmore street store of Hirsch & Kaiser's and beyond doubt, the same courteous and painstaking methods that have given him such a host of friends in the past will assure him an ever

increasing circle in the future. Both Mr. Bacon and the enterprising firm with which he has associated himself are to be congratulated on what must prove a most satisfactory arrangement for both.

Enterprise of the California Camera Club

Despite the fact that suitable quarters for a club were well nigh unobtainable by such wealthy and influential organizations as the Olympic Club, the Bohemian Club and the like, and secured by them only after considerable delay, the California Camera Club went quietly to work and secured conveniently located quarters which have been rapidly fitted up in such a manner as to appeal to many of the members as more convenient than the old home on Market street. When it is remembered that those on whom the work fell, almost without an exception, were heavy sufferers by the recent misfortune which befell the city, and that their work in behalf of the club was a voluntary contribution of time which their own interests made valuable; too high praise can hardly be bestowed upon them. That they have been able to so quickly and completely place the members in a position to enjoy as good if not better accommodations than heretofore, speaks strongly of their zeal and enthusiasm in behalf of the Club. The California Camera Club is to be commended on its spirit of enterprise and pluck and CAMERA CRAFT hereby tenders its most hearty congratulations.

Mr. Curtis and His Able Co-worker, Mr. Muhr.

We feel that we may be pardoned for expressing our pride at being able to present in this issue a nearly perfect reproduction of one of the wonderful pictures of that great photographer and photographic-historian of the American Indian, E. S. Curtis of Seattle. Not only this, a three color reproduction of an actual photograph in colors, but we are giving our readers a full and detailed account of the process which Mr. Muhr employs in their production, from the pen of that photographic wizard himself. These pictures have been shown in most of the large cities in this country in response to urgent requests from artistic and scientific bodies, and wherever displayed they have created a furore such as no other productions of the camera have been able to approach. A collection of these pictures was one of the features at the National Convention at Niagara Falls. We must ask our readers, however, to thank Mr. Muhr and not ourselves for so valuable an article. The article was promised us months ago but its production delayed as we hoped for the perfection of a new photo gravure process that would allow us to do several of the pictures full justice The reproductions were made and the article printed in our April issue which went up in smoke at the binders. This necessitated the rewriting of the article which Mr. Muhr, with characteristic kindness undertook. Since these pictures of Mr. Curtis' have been shown, he has been requested by almost every photographic magazine published, to favor them with an account of the process

employed, but despite our own delay in the matter, CAMERA CRAFT was felt to have first claim. This explanation is made in order that none of our fellow editors may be accused of negligence in the matter, and also to explain why the furore created in the East did not result in publicity in the photographic press of that section. In passing, a characteristic quotation from Mr. Muhr's last letter will no doubt be of interest and give to his article, in connection with his portrait, a touch of the personal element that will add to their value. He writes:

"As you will see, my method of procedure is entirely different from the method of others as I employ a number of colors from the very start. Even though I say it myself, our recent work is, to use a little slang, great stuff. My saying it does not make it so, but others whose words count in art matters have expressed themselves as strongly. Dr. Power's article will of course be most interesting as describing a comparative method, although it has no other bearing on the method which I pursue; mine being, as we style it, a polychrome as well as a multiple printing process. That the results are different from those secured by other methods, is conceded by all who have seen the work in the East. For these reasons I cannot be said to be working along the generally accepted lines. I may, as I have done right along, change or vary details of the method employed, but the process is always based on the original plan of getting color effects in the first printing."

Last month we mentioned Mr. Curtis' article and pictures in the June *Scribner's* and that our readers may have a partial realization of the value of his pen pictures of Indian life we are making a few extracts from a continuation in the July issue of the same publication. The article is entitled:

"The Tribes of the Northwest"

The Northwest Plains Indian is, to the average person, the typical American Indian, the Indian of our school-day books—powerful of physique, statuesque, gorgeous in dress, with the bravery of the firm believer in predestination. The constant, fearless hunting and slaughtering of the buffalo trained him to the greatest physical endurance, and gave an inbred desire for bloodshed. Thousands of peace-loving, agricultural-living Indians might climb down from their cliff-perched homes, till their miniature farms, attend their flocks, and at nighttime climb back up the winding stairs to their homes in the clouds, and attract no attention. But if a fierce band of Sioux rushed down on a hapless emigrant train the world soon learned of it.

The culture of all primitive peoples is necessarily determined by their environment. This, of course, means that all plains tribes—though speaking a score of languages—were, in life and manner, broadly alike. They were buffalo-hunting Indians, and only in rare cases did they give any attention to agriculture. Buffalo meat was their food, and the by-products their clothing, tools, and implements.

The plains tribes in earlier times were certainly true nomads. For a time, in the depth of winter, they camped in the shelter of some forest along the streams. Other than that, wherever roamed a herd of buffalo, there also wandered the tribes of Northern Indians. The very existence of these tribes seemed bound to that of the buffalo. From the skins their lodges were built. With the hair on, the hides furnished the robes for the body as well as mattresses and bed coverings. The meat, prepared in

many ways, with the addition of a few roots and berries, furnished their entire food. Advancing civilization has swept these countless herds from the face of the plains, and left their human companions stranded.

The Indian's View

In a cabin on the plains of Montana three of us sat talking; an educated plains Indian, a Government sub-agent, and myself. I was telling of the splendid advancement of the Apaches, and how well they would work. At the close of my story the agent turned to the Indian and asked him, "Why don't your people work like that?" All about the cabin, as a decorative frieze, was a row of buffalo skulls. The Indian looked up at those skulls, saying; "They tell you why. While those buffalo were alive we did not need to work. Only niggers and white people farmed. We were a superior race and had nothing but contempt for those who worked. Do you realize that I, a comparatively young man, know the days when if we wanted food, we had but to ride out on the plains, shoot buffalo, or other game, and the women would go out and bring it into camp? Do you expect us, in the fraction of a life-time, in the quarter of the age of an old man, to have changed our whole life, and even to have forgotten the days of the old freedom when we were lords of all the great plains and mountains? In what way does your civilization benefit us? Before you had attempted to force your so-called civilization upon us we had every desire of the heart! An easy, simple, carefree life; and to the worthy and brave a certainty of a future life of plenty and comfort. What has your civilization done for us? Robbed us of our land, our strength, our dignity, our content. Even your religion has robbed us of our confidence in the hereafter. What have you given us in return? Desire, corruption, beggary, discontent. You have robbed us of our birthright, and scarcely given us a husk. You said we did not make use of the land as the white man would, so you took it from us and use it as you like. I could as well go to the man who has his millions loaned at three per cent, and say, 'You are only getting three per cent. for this. I can use it and make ten. I will take it because I will make the best use of it.' "

Curley

The Custer battle-field is close to the Crow Agency. In a desire to know all that I could, at close range, of the tragedy of the Little Big Horn, I spent many days in going over the battlefield foot by foot, from where the troops left the Rosebud to the ridge where the men had made their last stubborn fight. White marble slabs mark the spots where they fell. In most cases the slabs are in twos, side by side. Strange how it is when it comes to the final end, we reach out for human companionship. There they made their last earthly stand, bunkie by bunkie.

Among the dozen of Indians I questioned of the fight was Curley, who is so often called the sole survivor of the Custer fight. He has been so bullied and badgered, questioned, cross-questioned, leading-questioned, and called by mouth and in type, a coward and a liar by an endless horde of the curious and knowledge seeking, that I doubt today, if his life depended upon it, he could tell whether he was ever at or near the Custer fight.

Red Cloud

But it is among the Sioux that we find the greatest number of old historical characters. Each year cuts down their number, and soon these old fellows who know of the days before the coming of the white man will be no more. Red Cloud is, without doubt, the record holder of the living North American chiefs today. His home is close to Pine Ridge Agency. Ninety-one years old, blind, almost deaf, he sits dreaming of the past. No wonder he is irritated by the idle information seeker! Who would be called back from the dreams of his youth? Sightless and infirm, he is living over the days when in youth he sat his horse as a king, the pride of the great Sioux nation. To his ears must come the roar of the hunt as the countless bison herd, like a tidal wave, rolled by; and, again, the great day of his life, when his red-blanketed band swept down on the hapless Fetterman troop. Even now his heart must seem to stand still as he lives over again that day.

A Photographic Digest

By H. D'ARCY POWER, M. D.

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Enlargements in Carbon Tissues

If we may judge by the accounts that have so far appeared we are about to participate in advantages afforded by one of the most important practical improvements of recent years. Of all the printing processes the most perfect, by general consent, is the so-called "carbon process." It gives the longest scale of gradation, that is to say, it reproduces the negative more perfectly than any other; it is as indestructible as the pigment of which it is made, and when this is lamp black on a glass or metal base, it may well outlast the pyramids. It approaches gum bichromate in plasticity, for a print may be produced in any color, and whilst a normally developed print exactly reproduces the negative, it may, like gum, be greatly modified by local treatment. It is three times as sensitive as solio, but alas! not sensitive enough to permit of direct enlargements, except by the solar lantern. Could direct enlargements be easily made on carbon tissue it would take first place in professional and amateur work. Various attempts have been made to increase the sensibility of carbon tissue so as to permit of such enlargements but no general workable method has so far been devised. Others have endeavored by indirect roads to reach the same result, that is to say they have sought to convert an ordinary bromide enlargement into a carbon print. Something of this kind seemed promised by Kalatype, and years before, Wernecke had patented a method that failed to attain success. Now Mr. Manly, the inventor of Ozotype, has devised a method of easily and rapidly converting an enlargement on bromide paper into a carbon print with all the advantages of choice of paper, range of color and the indestructibility of that process. There is no doubt but that if the process is the success the foreign papers claim it to be, we have here a discovery of the first commercial importance. Amateurs also will greet it with joy—but we must not forget that the greatest advantage of the carbon process, namely, its perfect gradation, will not be shared by this indirect process. Bromide paper has a short range of gradation and the carbon print built on a bromide enlargement will have the gradation of the bromide and not what would result from direct printing on carbon tissue. Even with this limitation we are doubtless better off than in the past; for until today carbon enlargements have always been made from enlarged negatives, and the double printing involved in such a process is more destructive to the tonality than the sacrifice of range that bromide paper entails. The following details are taken from the British Journal of Photography. Doubtless some modification of this technique would permit the process to be applied to gum prints.

The New Methods of "Ozobrome" Printing

In Mr. Manly's new process, which he has patented, a bromide picture, which may be a direct print from the negative or an enlargement, is produced in the ordinary way by artificial light. After it has been developed, fixed and washed, it is put into a five per cent solution of formalin for five minutes to harden the film and render it insoluble in warm water. It is then washed to free it from the formalin. It may then be used at once or it may be dried and used at any future time. Bromide prints already in existence, if treated with the formalin, may be utilized.

Here is the procedure:—If the picture has been dried it is put into cold water and a piece of the pigment plaster—the inventor says the ozotype plaster alone is suitable—is taken and immersed till limp in the patent "pigmenting solution." The two are then squeegeed together and allowed

to rest for half an hour or so. The "pigmenting solution" is, according to the specification, of potass bichromate with a mixture of potass ferricyanide and potass bromide, to which may be added a small quantity of alum. The print and plaster having remained in contact for the necessary time, there are then two methods of procedure open to us. The first is as follows:—The picture, with its adherent plaster, is put into warm water at a temperature of 100 deg. Fahr. After a short time the pigment will be seen exuding from the edges, when the plaster can be stripped off and the unaltered gelatine washed away, just as in the ordinary carbon process. Here we get a non-reversed carbon picture on the top of the silver one, the color of which has been changed from black to a yellowish-brown by the action of the carbon sensitising solution. The silver image, if desired, can then be got rid of by dissolving it away with the usual ferricyanide and hypo reducer or with a solution of perchloride of iron as suggested by Wernecke.

The second method of working which seems to me to be far more commercially valuable than the first is slightly more trouble but possesses very decided advantages. Instead of putting the picture with its adherent plaster direct in warm water it is put into cold, the plaster stripped off, and at once squeegeed on to a piece of single transfer paper. It is then placed between blotting paper and allowed to rest for ten minutes or so as in the usual method of working the carbon process by single transfer. It is then developed in warm water in the usual way. Here again we get a carbon picture which is not reversed as regards right and left but without a silver image beneath it. The bromide orignal, which has been changed from black to a yellow-brown, is washed to free it from the chemicals and can then be re-developed with any of the ordinary developers for bromide papers and the print then becomes equal in appearance to an original bromide. What is more it can be used again to produce other carbon pictures. Mr. Manly tells us that the same bromide original will continue to serve so long as the paper foundation will hold together.

As to the theory of his process, the inventor states in the patent specification:—"In the process forming the subject of my invention the ferricyanide and haloid salts first bleach or halogenise the silver image and the reducing action thereby set up, is taken advantage of to decompose the bichromate salt rendering the gelatine insoluble. The bichromate salt has, therefore, only a secondary action and is not affected by the silver image. This is shown by the number of prints that can be produced from a single bromide silver print."

Control in Carbon Printing

Speaking of the possibility of modifying a carbon print *a la* gum bichromate, reminds me of a suggestion by Mr. Cherrill, the inventor of the printing frame of that name, that the advantages obtained by multiple printing in gum could also be realized in carbon by making superimposed transfer. In *Photograph*, No. 911, he gives the following practical directions for carrying out the idea.

"To do this the 'temporary support' (in double transfer work) must be fixed to a rigid foundation which can be provided with two pins corresponding to those on the printing frame. Practically this may be done by cementing a piece of 'flexible support' to a zinc plate with the insoluble paste. Two brass pins inserted near the edge of the plate give the necessary register. The tissue is held during printing, and until the moment of transfer on a carrier, formed of a piece of thin sheet zinc provided with the usual notch for register and perforated near the center by a rectangular aperture. For all small sizes, say up to 5x7 this aperture may be about 2x3.

To use this simple apparatus, the tissue is temporarily fastened to the carrier by two strips of gum paper, such as stamp edging. The easy way to do this is to place the tissue in place on the negative, then to fit the carrier in register with the pins and then to apply two strips of gum paper at opposite edges of the rectangular opening. When the printing is finished the transfer is made by plunging the transfer plate into a deep dish of cold water and then placing the carrier with the tissue attached, exposed side downward also into the water. The register is secured by the pins on the transfer plate being made to engage with the notch and straight edge of the carrier at the moment of squee-

geeing. The squeegee is applied first over the rectangular opening in the camera. Then the gum paper joints can be torn—being wet they will tear with great ease—and the carrier removed; directly this is done the squeegee should be again applied, working lightly from the center in all directions. After development in the usual way, the print should be alumed, rinsed, and set up to dry. When, however, a second image is to be superposed, it is not necessary to wait for the first to become quite dry. If the surface moisture has disappeared, that is all that is necessary and the plate may then be at once plunged in cold water to receive another piece of exposed tissue transferred to it in the same manner as the first.

A little reflection will show that if the operations described in the last paragraph are carried out with reasonable skill, the maximum error in the registration between any two superposed images from the same negative will amount to the difference of expansion which takes place during the soaking of the two pieces of tissue. By timing with a watch and so equalizing the soaking the error arising from this cause will be so slight as to be a negligible quantity. I find forty-five to sixty seconds the best time for soaking. This is much shorter than in the usual practice of carbon printing but it is quite enough if the plate be kept under pressure for ten minutes before development.

When all is finished, the transfer to final support is effected in the usual manner. If it be desired to work in this way but with single transfer the only difference in the proceeding is that in place of the flexible support laid down permanently on the transfer plate, a piece of single transfer paper must be mounted temporarily thereupon. I should perhaps mention that the 'flexible support' once laid down in zinc as described lasts for an indefinite number of prints and that it is very much more convenient to use in this form than in its original 'flexible' condition.

On Standardising Gum

The following article by T. H. Greenall in *Amateur Photographer,* (English) is of interest and practical value to the gum worker. It will be seen that in a general way the writer follows the same method as I advocated in a recent article, but he dwells on points of technique that are worthy of careful consideration. He says:

"In gum printing it is very important that the coating mixture should always be of the same degree of gumminess or of known strength in gum so that the operation of coating may be easy to perform and the coating uniform in thickness; whilst at the same time it is a great advantage to be able to alter the proportion of bichromate in the mixture in order to vary the speed of the paper and so get hard or soft results at will.

In order to secure these ends it is necessary to discard the stock mucilage and ten per cent bichromate and to use a freshly prepared solution of gum to which is added the pigments and a weighed quantity of powdered bichromate at the time of using.

To prepare the solution of gum, take a small vial and measure its capacity. Let us say, for the purpose of illustration, it holds eight fluid drachms. This will take seventy grains of gum arabic which must be crushed very small and carefully weighed. The bottle must be now partly filled with water leaving room for the gum. Do not put the gum in first. Finally fill up with water so that no air space is left, cork the bottle, and lay it down, turning over occasionally to hasten solution. In practice it is best to make this solution the night before it is required and use it up within a few days.

The pigments must be kept in well-corked bottles, in the form of cream prepared by grinding the powder colors with a little of the above gum solution or ready ground painter's colors may be used and diluted with gum solution to the required strength. A good cream consists of drop black, five parts by weight; burnt sienna, one part by weight; gum solution, twenty parts by measure. For multiple printing, twenty minims of this is sufficient for four drachms of coating mixture and of course more or less may be used as required. To find the strength of paste colors, weigh out a drachm of the paste and dry it in the oven. The weight, after drying, will give the quantity of dry pigment in the paste. As a rule, two parts of stiff paste are equal to nearly one part of powdered color.

To make the coating mixture, take four drachms of the gum solution, twenty minims of the pigment cream and twelve grains

of bichromate of potassium which must be ground very fine in a mortar and will then dissolve in a few minutes. This is the normal strength. If the negative be very soft or if greater contrast is desired, use half the quantity of bichromate. N. B.—The mixture must be strained through fine muslin before using and the brush must be clean and dry. When dealing with such small quantities a very little water introduced with a wet brush or wet measure will altogether alter the mixture.

Now with regard to control in printing, the following experiment is very instructive. Coat three strips of paper, No. 1 with coating mixture containing three grains only of bichromate in four drachms, No. 2 with the same containing six grains and No. 3 with the same mixture containing twelve grains bichromate in four drachms. Expose these strips simultaneously side by side under a negative and develop them together by simply floating in water. It will be found that No. 1 will have rendered the shadows only, whilst No. 3 will show details in the high lights. The same experiment may be done using an actinometer of tissue paper instead of a negative. By keeping the exposure constant and varying the amount of bichromate we can therefore easily regulate the results in multiple printing. For example having got a print with normal coating mixture, it may need a second coat to strengthen the shadows. For this second coat use a mixture with half the bichromate and give the same exposure as before.

It is possible to get a still more rapid paper, which might be useful for hard negatives, by using nineteen grains of bichromate in four drachms coating mixture. This is as much as the cold gum will hold in solution. If the paper is coated with hot mixture, as much as forty grains bichromate may be got in four drachms and experiments with the actinometer show that the paper is still more rapid. It seems to me that those who recommend modifying the coating mixture by the addition of more or less bichromate solution in order to make it coat easily are introducing a new factor of great value when properly used but in many cases fatal to success. In all these tests the proportion of pigment was the same. I have not experimented on the influence of the pigment in modifying the speed of printing.

P. S.—I think the use of chrome alum in sizing is not to be recommended when prints are wanted to develop automatically in cold water as the alum may get into the gum coating and render it insoluble.

Stripping Printing

Describing some prints sent in by a correspondent, *Photography*, (England) says: "Two very curious prints have been sent to us by a correspondent, Mr. T. J. Hobson of Worchester.

The prints were made on Ilford P. O. P. in 1894 and instead of being put in the toning bath, were accidentally treated with the No. 2 solution (caustic soda) of a hydrokinone developer. Perhaps the circumstances connected with their production are best given in Mr. Hobson's own words. He says: 'On pouring it over the prints they at once curled, gelatine outwards, and the paper backing commenced to peel off like pulp. Finding the prints were ruined, I stripped off the remaining paper from the film and after well washing them I fixed them in hypo. When they were put into the water they became much larger and remained of the size they now are. After fixing and washing I floated them on to their present paper support without any adhesive or other matter being on the paper. It would be easy to strip any print from its gelatine support and by reversing its use in the same manner as carbon prints are for making reversed negatives for mechanical printing or for enlarging a print.'

We have seen the prints which are now about twelve years old but are still a strong deep red, one inclining to brown, and there are no signs of fading or of alteration in any way. Nor is there any indication that the film suffered any damage in its transference.

Actinic Dark Slides

F. G. Palmer writing in the *Photogram* shows that aluminum dark slides not infrequently exhibit radio-activity, with the result that the plates they cover become hopelessly fogged. He also refers to the experiments of G. Lunn published in the *Chemiker Zeitung* condemning aluminum for all photographic purposes on this account.

The Amateur and His Troubles

By FAYETTE J. CLUTE

The Amateur and His Troubles

A correspondent writes concerning a formula as he wishes to do some experimenting. I can assure him that it is entirely practical to so develop prints on printing-out paper and by working in that way one can produce enlargements on such paper if he uses daylight and a pair of condensers. All that is necessary is to see that the paper is exposed to light as little as possible except during exposure and in developing use a developer that is acid instead of alkali. A good formula is as follows:

Pyro	120 grains
Sulphite of soda (crystals)	1 oz.
Citric acid	40 grains
Water	4 ounces

One ounce in ten ounces of water makes a developer ready for use. Test with litmus paper and if not acid, add more citric acid, in the form of a ten per cent. solution for convenience. Amidol is another good developer which can be used as in the above formula. Metol will also be found to answer admirably although the citric acid will have to be increased to double or more.

Formulæ in Parts

A correspondent in Iowa writes me in the same strain as have several others recently. He wishes to know how he can make up such formulae when both the solids and liquids are given in "parts." In ordinary practice it is sufficient to estimate the solids in grains and ounces and the liquids in minims and ounces, calculating four hundred and eighty grains to an ounce solid and a like number of minims to an ounce liquid. This is near enough when the only fluid called for is water which is used as the solvent. Where more exact methods seem advisable it would be better to bear in mind that one fluid ounce of water weighs very nearly four hundred and fifty-six grains. Now we will suppose we have a formula like the one in the last paragraph, only written in parts. It would be something like the following:

Pyro	120 parts
Sulphite of soda (crystals)	480 parts
Citric acid	40 parts
Water	1824 parts

Calling parts grains it is an easy matter to reduce this to the original formula. Supposing that instead of an odd number of parts of water they were in round figures as they usually are, say:

Water	2000 parts

we would divide this by the number of grains of water in an ounce solid and have four ounces, three drachms and a little more, remembering that a drachm of water weighs fifty-seven grains.

Toning Bath Formula

The formula of which you complain is evidently at fault through a typographical error in the magazine from which it was taken. It is most uncommon for a writer to mix grains and cubic centimetres in the same formula and besides, one-half grain of tartaric acid in two litres, equal to over seventy ounces of water, is hardly worth considering. Where the formula reads grains you can understand that grams are meant and this will make your half grain read nearly eight grains. Corrected thus and changed to the weights and measures generally used in this country, the formula reads:

Two per cent. solution of sulphocarbamide	80 minims
Tartartic acid	1 grain
One per cent. solution chloride of gold	100 minims
Chloride of sodium (common salt)	40 grains
Water	8 1-2 ounces

For the benefit of other readers I will

say that the clipping my correspondent sends says that M. Helain of France recommends this formula for all kinds of printing-out paper, toning being completely under control and giving a wide range without danger of double tones.

The tartaric acid is to be dissolved in the solution of sulphocarbamide and the the gold added slowly, stirring all the time; the salt and water being added last.

Metol Poisoning

Anent our note in the last issue, several have sent us advice concerning treatment for metol poisoning, instead of sending to Mr. Turner of the Yanit Chemical Company as requested. From a correspondent in Oregon, a chemist, we have the following recommendation; The bowels should first be regulated by taking Rochelle salts and this followed the next day by Swift's Sure Specific (S. S. S.) taken according to directions for scrofula; attention being given to guard against any tendency to dyspepsia and constipation. Another correspondent sends us a copy of a clipping credited to an Italian authority, for an ointment composed as follows:

Ichthyol	2 drachms
Lanoline	4 drachms
Vaseline	6 drachms
Boracic acid	1 ounce

This last looks very promising as we have known workers who were susceptible to metol poisoning to avoid all difficulty by rubbing Lanoline well into the hands before starting in to develop. Boracic acid has also been recommended as a remedy for the itching and cracking of the skin which is such a prominent symptom.

Objects Out of Plumb

A reader up in Washington recently sent, as is his habit from time to time, a few prints for criticism. In one case the principal objects were several large trees in the near middle distance, all leaning decidedly to one side. I suggested that he trim the print so that these trees appeared perpendicular. In reply he said that the trees actually leaned as shown and he could not see, particularly when trees in a wind swept location often did so, why they should be changed by trimming. As my correspondent evidently has not advanced to that point where it would be satisfactory for me to explain that a series of leaning lines unsupported either by line or mass, was not good composition, I will try another method of explaining the matter, a method that will more likely appeal to his practical way of looking at things. A certain automobile agent that I know recently wanted a picture of one of his cars showing its hill climbing power. A photographer went to a hilly piece of road and photographed the car doing a pretty stiff grade. The work was technically perfect but the picture looked exactly as if the machine was on a level piece of road but the print had been trimmed crooked. The work was tried all over again, this time the occupants of the car all leaning forward at a decided angle. The piece of roadway selected was almost level but by double printing the photographer introduced some trees, telegraph poles and a small house, from another negative representing a rather steep hillside and the nearly level roadway was adjusted to suit the new angle. The leaning trees of our correspondent's picture would be all right if the view also included other well defined objects to prove that the trees actually leaned strongly to one side and were the composition so arranged that the lines at such an angle were supported or contrasted by others more upright, the effect could be made quite pleasing. As it is the first impression of a picture out of plumb is so strong that the picture has no chance of pleasing, either as a pictorial result or even as a record of a fact. It is not satisfying as the first and fails to prove its case as the second. One of the best pictures in one of the recent Kodak competitions represented some trees all leaning much as the ones in the picture sent by our friend but the leaning mass formed by their foliage was supported in just the right place by a mass of low foliage and a strong foreground of heavy wall at once obviated any danger of the print appearing out of plumb. In addition to this, the location of the trees and the form of clouds in the sky, so suggested a wind swept landscape that one could appreciate the conditions at the first glance.

Club Notes

Third American Salon

The Third American Photographic Salon, 1906-07, will be shown at New York, Philadelphia, Washington, Pittsburg, Chicago, San Francisco, Minneapolis, Providence and Toronto.

The American Federation of Photographic Societies includes the following: Brooklyn Camera Club, Capital Camera Club of Washington, D. C., Chicago Camera Club, Columbia Photographic Society of Philadelphia, Hartford Scientific Society (Photographic Section), Metropolitan Camera Club, Minneapolis Camera Club, Pictorial Club, Pen, Pencil and Camera Club, Portland, (Me.) Camera Club, Providence Camera Club, Salon Club of America, Toronto Camera Club, and Wyoming Valley Camera Club.

The officers of the Federation are: President, R. L. Sleeth, Jr.; 1st Vice-President, William T. Knox; 2nd Vice-President, Charles E. Fairman; 3rd Vice-President, Adolph Petzold; Secretary, Paul H. Reilly; Treasurer, William H. Phillips; Salon Director, Louis Fleckenstein; and Historian, Daniel Baker.

The Preliminary Jury is composed of well known photographers who will select about one thousand frames to be acted upon.

The Final Jury of Painters: John W. Alexander, Chairman; Joseph R. Woodwell, Martin Borgord, H. L. Hildebrandt, George Sotter and J. E. Laboureur.

No prizes will be offered, but the Federation will purchase three pictures to be chosen by the Final Jury at double the catalogue prices, the total amount to be paid for the three pictures not, however, to exceed $200.

As a guide to those who have not exhibited at previous Salons (to save expense and delay, and also to avoid the impossible task of properly and carefully judging ten thousand entries in Pittsburg), it is requested that their entries be submitted to the local jury for their district, as per list below, who will forward all approved work, in one carefully packed shipment, to the National Jury at Pittsburg.

Work returned by the local jury *may* be sent to the National Jury by the exhibitor himself, if he so elects, and will receive full consideration. American entries must be framed.

For District of Columbia, Delaware, Maryland and all South Atlantic States—to Charles E. Fairman, Capital Camera Club, Washington, D. C.

For Vermont, New Hampshire, Rhode Island and Massachusetts—to Wendell G. Corthell, Boston Camera Club, 50 Bromfield St., Boston, Mass.

For Ohio—to E. G. Fountain, Cleveland Camera Club, Cleveland, Ohio.

For Canada—to J. P. Hodgins, Toronto Camera Club, Forum Building, Toronto, Canada.

For Maine—to S. S. Skolfield, Portland Camera Club.

For Illinois, Indiana, Michigan, Wisconsin, Iowa, Kentucky and Southern States—to Robert E. Weeks, Chicago Camera Club, Chicago, Ill.

For Minnesota—to Louis Fleckenstein, Faribault, Minnesota.

For Kansas and Colorado—to Thomas A. Morgan, Denver Photographic Society.

For California—to Fayette J. Clute, care Camera Craft, San Francisco, Cal.

For New York and New Jersey—to Wm. H. Zerbe, No. 345 Spruce St., Richmond Hill, N. Y.

For Pennsylvania and all districts not named—to Pen, Pencil and Camera Club, 510 Smithfield St., Pittsburg, Pa.

The work of those who have exhibited at previous important Salons need not be submitted to the district juries, but should be sent to the nearest Federation Camera Club and included with their shipment.

Any exhibitor may send direct to the National Jury, care Pen, Pencil and Camera Club, 510 Smithfield St., Pittsburg, Pa.

Foreign entries are to be sent mounted or unmounted, but not framed.

All entries from Great Britain should be sent, to arrive by Oct. 1st, 1906, to H. Snowden Ward, 6 Farringdon Avenue, London, E. C., England, marked "For Third American Photographic Salon." (By including all British work in one shipment the exorbitant charges at this end will be minimized). All entries from Italy, to Alfredo Orñano, 21 Via Caffaro, Genoa, Italy, to arrive in his hands by Oct. 1st, 1906. All entries from Norway, Sweden and Denmark, to Copenhagen (Denmark) Camera Club, before Oct. 1, 1906, marked "For the Third American Salon." All entries from Australia may be sent to A. Hill Griffiths, 66 King Street, Sydney, N. S. W., and should arrive in his hands by Sept. 1, 1906. Entries from all other countries should be forwarded direct to Pen, Pencil and Camera Club, 510 Smithfield St., Pittsburg, Pa., U. S. A., marked "For American Salon in Bond to Pittsburg."

The conditions are as follows: 1. Only work which gives distinct evidence of artistic feeling will be accepted. 2. There will be no invited work, and all prints forwarded will be examined by the Preliminary Jury, who will submit about one thousand frames to the Final Jury of Painters. 3. No work entered at the First or Second American Salon will be eligible,—as it is desired that the Annual American Salon shall represent the work of the current year. 4. The work of the Preliminary Jury will be to select all pictures that give evidence of sentiment and individuality, regardless of style and school; these to be submitted to the Final Jury. 5. Each person intending to contribute is requested to notify the Secretary—Paul H. Reilly, 46 Lomond St., 6th Ward, Pittsburg, Pa.—a month or more in advance of the closing date, but failure to do so will not prevent acceptance of work. 6. Entries must be suitably framed or glazed, and the title, name and address of sender plainly written on the back of each—excepting in the case of foreign contributors. 7. Pictures from other countries to be forwarded without glass or frame, but should be suitably mounted. Accepted work from abroad will be carefully framed at the expense of the management. Foreign work should be sent by mail wherever possible. 8. Every contributor must pay the expense of forwarding to and from the Exhibition. 9. Pictures will be returned as soon as practicable after the close of the Exhibition, and in the same manner as sent to it, unless there be instructions to the contrary. 10. The Jury will not know the names of contributors until after the selections have been made. 11. All entries must be delivered at the rooms of the Pen, Pencil and Camera Club, 510 Smithfield St., Pittsburg, Pa., U. S. A., and packages should be marked "For the Photographic Salon." 12. A list of the titles must be sent separately by mail giving the name and address of sender, price of each if for sale, and special instructions, if any. 13. All work (mounting and framing excepted) must be done by entrant. Sign names of collaborators. 14. All work will be insured against loss by fire. 15. A commission of fifteen per cent. will be charged upon each sale made by the various clubs holding the Salon. 16. A catalogue will be forwarded to each exhibitor. 17. Wherever foreign postal laws forbid photographs bearing the name and address of sender (if any do) the photographs should be numbered, and the titles (opposite corresponding number) mailed separately to Paul H. Reilly, 46 Lomond St., 6th Ward, Pittsburg, Pa., U. S. A.

Preliminary Announcement

The Second Annual Photographic Exhibition of the Photographic Section of the Academy of Science and Art of Pittsburgh, will be held in this city during November, 1906.

Pictures will be accepted in two classes: Pictorial and General. All work entered for the Pictorial Class will be judged by a jury of painters.

The General Class will comprise examples of work shown for its technical qualities. Photographs by Artificial Light, Photography as applied to Industrial and Educational purposes, Historical Record Work, etc.

This Exhibition will be open to all Photographic Workers.

Prospectus and entry form can be had on application to the Secretary.

J. M. CONNER,
Secretary.
Shetland and Findley Avenues.

Notes and Comment

The Post Card Collectors

The Northwest Post Card Union, Medford, Oregon, under the able management of Frank H. Hull, the well known view artist of Oregon, is rapidly gaining a large membership and one that is a guarantee of satisfactory and prompt exchange. The members are listed in a sheet that is sent out each month and as the rules are simple and the benefits large, membership in the society appeals very strongly to those interested in the delightful hobby of collecting illustrated post cards. Mr. Hull issues a very nice set of view cards depicting some of the natural beauties of Southern Oregon scenery that needs no praise from us. The members are enabled to exchange with others in all parts of the world and in that way secure a collection of post cards that will have both interest and value. Membership is 25 cents which is paid but once and which entitles one to a full list of the members and two handsome cards. Those interested should write at once for prospectus and membership blank.

A New Advertisement

One of our most attractive new advertisements this month is the announcement of Wolff & Dolan, the manufacturers of Probus preservative paint. This compound is an article that has been given the most severe tests and was placed upon the market only after being thoroughly perfected. Probus requires careful labratory manipulation in its manufacture and is guaranteed to fulfil all the exacting requirements of a preservation compound which will wear well, and resist acids, alkalis, fumes and gases. Probus will prove invaluable to photographers, photo engravers, and all others who desire a preparation for rendering trays and sinks perfectly water tight and one which may be used in a thousand useful ways around photograph galleries, half tone shops, lithographic plants and the like. In addition to the superior merits of Probus, the fact that it is surely a Pacific Coast product, assures its manufacturers a large demand. Their willingness to guarantee their preparation should inspire confidence, and the greater utility of the compound must make their announcement appeal to all who are in need of such a preservative paint around their establishments. As Messrs. Wolff and Dolan believe that the best advertisement of Probus is Probus itself they are willing to send a sample of their preparation to all who wish it, for fifteen cents to cover postage and packing. A piece of wood showing the Probus coating will be sent free of charge—upon request. Probus preservative paint is placed upon the market in pint, quart, half gallon, gallon, and five gallon tins, and Probus trays and fixing baths in all standard sizes. Special styles and sizes will be made to order if desired. Price lists and literature fully descriptive of Probus and Probus products may be had upon application to the manufacturers.

A Fine Exhibit

Bausch & Lomb Optical Company had one of the most attractive exhibits at the Convention. They have collected a series of photographs made with their portrait lenses, notably the Portrait Unar and the Series A f-4. These photographs, the work of such eminent photographers as Strauss & Rosch of St. Louis, Davis & Eikemeyer and Pach Brothers of New York, Matzene, Steffins and Morrison of Chicago, Rinehart of Omaha, Brock & Koonce of Ashville, N. C., Partridge of Boston, Edmondson of Cleveland, Dudley Hoyt of Rochester and others.

These gentlemen have certainly done themselves and their subjects proud. Such results being achieved with B. & L. lenses, every photographer in the country will be wanting one in order to try his skill therewith, and every person desiring to be "taken" will insist that it be done with a B. & L. lens.

The exhibit shows the advantage of being able to avail oneself of the various points of excellence possessed by the Portrait Unar

and proved conclusively its ability to "make good." Busts, three quarter and full length figures are all equally well translated into perfect portraits by means of this splendid lens.

After seeing the excellent results obtained by its use one is not surprised at its popularity.

More Room Demanded

The increased business with which the popular firm of Hirsch & Kaiser have been favored, has necessitated their securing still more room. Their last acquisition in this line is ground floor space in the new building being erected on Bush street, near Fillmore. This will give them twenty-five hundred square feet which will be used mainly as a receiving and shipping department, allowing them to store conveniently the surplus stock which their retail store on . Fillmore cannot accommodate. The sales department will remain as heretofore at 1757 Fillmore street where their offices are also located. This enterprising firm realizes the importance of handling all orders promptly and this new shipping department will assure their customers immediate shipments of all goods ordered and will give them an opportunity of carrying a larger stock with which to supply their ever increasing trade.

Rehabilitation of the Stuparich Factory

The manufacturing establishment of the Stuparich Manufacturing Company that was located at Eight and Brannan streets in this city was entirely destroyed by fire during the conflagration which visited San Francisco last April. The Company, however, has worked night and day to rehabilitate its plant and the new factory, when completed, will be larger and more perfect in equipment than before. The firm trusts all its customers and patrons will appreciate the tremendous loss that has been sustained not only by the Stuparich Manufacturing Company, but by San Francisco generally, and that they may in the future receive from their customers and patrons the kind and liberal consideration they have enjoyed in the past. The new plant will be one of the largest of the kind in this country and the output will be of a quality second to none. All the old customers and the trade generally have been advised of the firm's effors to resume business at the earliest possible moment and it is through one of these announcements, signed by President P. J. Stuparich for the Stuparich Manufacturing Company, that we are enabled to make this statement which will serve as a reply to the many inquiries we have received from our readers as to the intentions of the firm. Their announcement will no doubt be resumed in our advertising pages at the earliest date on which it will be possible to assure their friends of their being ready to fill orders.

"Billie" Lussier with the Goerz People

The many Pacific Coast friends of the popular "Billie" Lussier will be pleased to learn that they may expect a view of his smiling face in the near future. Writing from Chicago he advises that he will be at the Northwest Convention in behalf of the C. P. Goerz Optical Works and then cover the Coast with a full line of the excellent lenses manufactured by this celebrated firm. As many of our readers know, Mr. Lussier was the able representative of the Cramer Dry Plate Works on this Coast for many years and the popularity of the Cramer plate was to no small degree due to the high esteem in which he was held by the trade, the professionals and the amateurs of this territory. With his own popularity and the high merit of the line which he now represents, Mr. Lussier is assured the satisfaction of doing a nice business and his firm is certain to greatly increase the number of pleased users of their lenses.

A Busy New Store

Lovick Bros. removed here from Pasadena just before the fire and were looking for a desirable location at the time this city was devastated. They are now located at 1336 Van Ness avenue with a well chosen stock which is maintained only by being constantly repleted, owing to the demands made upon these popular dealers. Harry Lovick is well and favorably known to the trade as a popular demonstrator for the Eastman Kodak Company with whom he was connected for a number of years before removing to this city. Both gentlemen are enthusiastic and expert amateurs as is

shown by their artistic line of work. Many of their pictures have appeared in former issues of Camera Craft as our readers will no doubt remember. This expert knowledge being placed at the disposal of their customers is no doubt the cause of the great popularity of their store.

The Imperial Exposure Meter

We have just been favored with one of the new Imperial Exposure Meters but as our readers can well understand, these are busy times and we have not had an opportunity of testing it as yet. It will be given a trial the first time a camera is used and our readers will be advised of our success. However, there can be but little question as to its reliability and its simplicity and convenience is apparent at a very superficial examination. To use it one has but to count the number of seconds a small piece of specially prepared sensitive paper takes to darken to the circular tint that surrounds the part exposed when testing the light; a sliding scale is then pushed along to the number of seconds indicated, when the correct exposure is at once indicated for all stops. There are no calculations and only one scale is set. The meter is gotten our primarily to enable users of Imperial plates to secure absolutely correct exposures but all plates are listed on the little booklet accompanying the meter so that its usefulness is applicable to any make of plates or film. The Imperial Plate which is so justly popular in England are now stocked in the most popular sizes by the firm of G. Gennert, 24-26 East 13th Street, New York and 53-55 Lake Street, Chicago. The Imperial lantern plate has long bourne a very enviable reputation in this country and the Process plate has been stocked in response to a demand which their reputation abroad has created. We should add that this Imperial Exposure Meter is obtainable of the firm mentioned as stocking the plates.

A New Firm

A new firm was incorporated in this city, July 11th last, under the name of the California Card Manufacturing Company. The firm will engage in the manufacture and sale of photographic cards, folders, cardboard and like products. The new firm is composed of gentlemen who have been connected with the photographic card mount business for years, several of them formerly being with the Stuparich Manufacturing Company of this city. Their factory will be in operation about September 1st, 1906, and their goods will be distributed through all the leading dealers in photographic supplies in this territory. The firm will make every effort to merit the hearty support of the trade and as they are working hard to do their share in the building of a Greater San Francisco and have spared no effort to place their house in a position to supply the trade at the earliest possible moment, should be favored with a liberal share of the patronage of the trade in this territory. Their announcement will no doubt appear in our advertising pages as soon as they are prepared to fill orders.

OUR BOOK SHELF

Hauff on Modern Developers

We have just received from the sole agent for the excellent line of Hauff developers, G. Gennert, New York and Chicago a copy of a handsome booklet with the above title. It contains some eighty pages and is full of practical information beginning with "The Modern Dry Plate" and taking up in order the subjects of exposure, sensitiveness, stopping down, method of experience, photometers, exposure tables, general rules and a very full and instructive article on development in general. Following these subjects, each of the modern developers manufactured by Hauff are described and their characteristics, formulae for using and the opinions of photographic experts of today. The department devoted to exposures is very full and a table with much valuable information is given. This handsome and well gotten up booklet will be sent free to all of our readers who will drop a request to G. Gennert, 24 East 13th Street, New York.

A Book on the Nude

"Photography of the Nude," published by C. Klary, Editor of *Le Phorogramme,* 18 Rue de Maubeuge, Paris, France. This is a handsome book well printed on the best plate paper and in addition to the text it is resplendant with reproductions of the

representative work of the leading artist photographers of the world who have made the study of the nude in photography contributary to art. The numerous poses are conceived in a classic spirit with such freedom and grace of posture as to entirely do away with that realism which is so fatal to the results secured at the hands of inexperienced and less cultivated artists. The book is not only of inestimable value to the student of the nude in art but it will be found of the greatest value to the general and particularly the portrait photographer as a means of study in posing. To such as are desirous of securing in their poses the natural grace and balance of the human figure. The book contains over one hundred illustrations, all of them photographs from nature with living models. The publisher will be pleased to send illustrated circulars of this and other photographic publications of a high order.

Color Photography

"Natural-Color Photography," by Dr. E. Konig and E. J. Wall, F. R. P. S. This book is composed of three sections; the first serving as an introduction in which is described the several processes heretofore put forth, under two classifications, direct and indirect. The other two sections are given up to a full exposition of the subtractive method and the addictive, respectively. The book is most complete, exhaustive and up to date; giving a full account of that which available in this field of work. The reader is not burdened with the history of color photography except as the past efforts have influenced present day work. On the other hand, all details are fully treated; color charts, diagrams and illustrations used where necessary and authority cited where the results of other workers' researches are given. All in all, the book is one of the greatest values to photographers interested in photography in natural colors. It is a handsome cloth bound volume of ninty-six pages, selling for two shillings, postage six pence, of Dawborn & Ward, 6 Farringdon avenue, London, E. C., England. It can no doubt be supplied by the American agents, Tennant & Ward, 187 Fourth avenue, New York.

The August "American Boy"

Three boys in a sailboat in a spanking breeze look out from the cover page of the August *American Boy*. The names of Stratemeyer, Tomlinson, Alger and Harbour stand out in the text in four stirring serials now running. Every boy knows that where these names appear there is something of interest to him. The titles of the stories by these well-known writers are additional evidence of their stirring character—"In defense of His Flag," "The Camp-fire of Mad Anthony," "The Young Book Agent," and "Four Boys in Camp."

But this is not all of the good material in this number. "Silver Prince" is a story of a homing pigeon by L. C. Byce. "Follow Your Leader," by James R. Perry is a story that will appeal to young boys. "Billy's Grit" is a baseball story of absorbing interest. Boys who like stirring adventure will enjoy "Capturing a Python" by Captain Hawser. Those more inclined to the substantial will read with interest "The Nicknames of the States," by Prof. Eugene Parsons, ex-Editor of "The World Today." Another installment of "My Young Sportsman," a series of articles descriptive of firearms and their use, appears in this number, with a large number of other good articles. "How to Play Baseball" by Prof. Norris of the Wenonah Military Academy tells about team batting and base running. Then there are puzzles, prize essays, clever work with a pocket knife, how to make dry batteries, chemistry for boys, workshop notes, photographs, stamps, coins, and curios, and interesting matter with reference to *The American Boy* Legion of Honor and the Order of *The American Boy,* with sprinklings of good advice from the editor. In addition there are over 80 illustrations. Subscription price, $1.00 a year. The Sprague Publishing Co., Detroit, Mich.

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CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

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CAMERA WANTS

Advertisements under this heading will be charged for at the rate of 50 cents each insertion for twenty-five words or less. Each additional word, two cents extra.

For Sale Cheap—5x7 Century extension camera, 6 plate holders, case. Camera fitted with Goerz lens, Series III, Sector shutter. J. D. Drake, Silverton, Or.

Post-cards—Join the "Northwest Post-Card Union," Medford, Or. Twenty-five cents inserts your name and furnishes you with list of exchange. Next list August 1st.

Wanted—Amateurs having cameras (not Kodaks), 4x5 or any size larger, can earn $5.00 per week by taking pictures for us at home. Send stamp for particulars. Oval Portrait Co., Caxton Bldg., Chicago Ill.

Wanted—A position by a sober Japanese a good all-round man, experienced also in carbon printing; bromide enlarging a specialty. J. S., 1617 Gough St., San Francisco, Cal.

Wanted—Studio in Southern California, Los Angeles or Pasadena preferred. State class and amount of trade with prices received for work. Name cash price. Address B. H. M., care Camera Craft.

For Sale—The leading photo studio in Central Washington; first-class and all new equipment; a good business; the best growing town in the West; population, 10,000; good reason for selling. Inquire Box 702, No. Yakima, Wash.

Wanted—A position as all-round workman in up-to-date gallery by young man with first-class ability in all the branches of photography; can give first-class references. Address J. E., care Camera Craft.

Wanted—A fountain air brush; state condition and price. H. B., care Camera Craft.

Situation Wanted—Bromide enlarger desires situation, is also a good retoucher. Address Wm. Thunen, Cherokee, Calif.

Wanted—Every amateur and professional photographer in the country to try our Carbon green developing paper. Send 25 cents for one dozen Carbon green and developer, or 50 cents for one dozen Carbon green and 8x10 Carbon green print, showing a view of the ruins in San Francisco. Artura Photo Paper Co., 1639 Fillmore St., San Francisco.

For Sale—Photo studio in one of the best coast towns in California. 15,000 inhabitants: have complete outfit for first-class work: have one 8x10 camera: Goerz lens: one 30x30 camera: Collinear lens: this studio gets all the best trade at the highest prices: well equipped in every way: a chance for a good photographer to make good money. Price $1,700.00 Address Box 580, Eureka, Cal.

For Sale or Exchange—Packard Bros. sketch ground 8x8 ft., with 6 foot floor cloth; light, sketchy effects for Platinum or Sepia. Perfect condition. Price, $10.00. Also Scoville & Adams 8x10 View Camera, 22-inch bellows, 2 double plate nolders, canvas case, Voightlaender lens and Duplex shutter. Take $50 or good wide angle lens as part payment. Address R. X., care Camera Craft.

PHOTO APPENDICITIS.

This is not a new disease, it used to be called—but that's neither here nor there. What concerns us most is a full description of the disease and the remedy.

This is set forth in the following extract from an article by Milton B. Punnett in the *Photographic Times* for July:

"A Vermiform Appendix, which afflicts the art of photography at present, is the idea that to obtain good results, each individual negative should have special treatment in development and that there are no general laws governing development, which, if thoroughly understood and applied will admit of developing en masse.

This is an appendix, which, as any amateur or professional can prove to his or her own satisfaction as the writer has to his, is filled with seeds of ignorance and stumbling stones of error. As far as film is concerned, to prove this statement is very simple. Expose two rolls of film as nearly alike as possible. Under, over and correct exposures can be given, but for every exposure on one film there should be a corresponding similar exposure on the same subject under the same conditions made on the other. Develop one in a Kodak developing tank or machine, following directions carefully. Develop the exposures of the other roll separately; starting development with a normal developer and giving to the individual exposures such treatment as the appearance of the image would in your judgment indicate. For instance, for over exposure use plenty of bromide or more of the developing agent or less of the accelerators, and for under exposures more water or any combination you may think advisable. In other words, perform your own operation for photographic appendicitis and I will guarantee a cure as far as the above cause is concerned.

Mentioning bromide recalls to my mind how I chuckled to myself at the absurdity of Watkin's statement that it was useless to add Potassium Bromide to the developer after the image had appeared. Hadn't I developed many a plate and when I saw that it was over-exposed added bromide and obtained a good negative when otherwise it would have been an absolute failure. I knew I was right, yet in order to convince others it was necessary to make comparative experiments, and so I did; result—lost—one photographic appendix.

The above experiments were made with plates. Lately I repeated them with films, developing one set in tank and one set by the Rip Van Winkle method of using bromide, examining image on surface and back, looking through it, etc., and now not even the scar of the previous operation is left. And it is as it should be, for the Kodak Tank and the material and instructions which accompany it are the condensed results of thousands of experiments, each experiment seeking to eliminate the false and retain the true. Mr. Child Bayley, editor of "*Photography*" and one of England's leading men in the science of photography, gets at the meat of the matter when he states "the system is at once scientifically sound and practically perfect," and "we are not interested in the Kodak products any more than in any of the other excellent manufactures which go to make the amateur photographer's path an easy and a pleasant one. But we are interested in everything which will help our readers to get *better* results, or a *higher* percentage of good results, than they have been doing. Every spool of film we expose (except that which has been exposed for the express purpose of trying other de-

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ROCHESTER, N. Y., *The Kodak City.*

velopers or methods) is developed in a Kodak Apparatus, and up to the present we have not lost a negative any defect in which we could fairly attribute either to the machine or the system." I may appear unduly enthusiastic on this subject, but as a lover of photography and one who has developed hundreds, yes, thousands of plates under the old system, I may be excused the enthusiasm of a convert who finds that he has an annoying appendix which he can so easily shed."

"While the mood is on me let me make a statement and on it base a prophecy: By using the tank developing system for films more and better negatives can be obtained than by individual treatment. Within a few years the stand development system will be almost universally used on plates and films.

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Certificate of merit Sixth Annual
Convention P. A. of P. N. W.

CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

VOL. XIII. SAN FRANCISCO, CALIFORNIA, SEPTEMBER, 1906. No. 3

Wrinkles

By W. G. Emery, Sec.-Treas. P. A. of P. N. W.

An Address Delivered Before the Sixth Annual Convention of the Photographers Association of the Pacific Northwest at Spokane, Washington

A celebrated art critic has said, "Photographers can never claim to be artists till, like the painters of old, they can bring forth and portray the soul of the sitter." If this be true the title of "Photographer" can always be written after my name, for I find trouble enough in trying to smooth out the wrinkles on the outside of a customer without reaching out; or rather in, after the probable blemishes on his soul. Besides, I believe that our proofs, wrinkles and all, look more natural to a customer's friends than would a photograph of his soul. What we, as photographers, have to study and reproduce is the exterior in its most natural and pleasing form. As like produces like, it is necessary for us to cultivate a pleasant and attractive appearance if we hope to call up a pleasing expression to the faces of our customers. The fewer lines of care and worry we have in our own faces the less apt are such to be reflected by the sitter, and the question of how best to smooth out our own wrinkles is what I wish to discuss rather than to give a technical lecture on retouching.

Many photographers cultivate a crop of wrinkles by constantly worrying over the business secured by their competitors. Don't do that. He has to buy bread for his babies the same as you. Don't frown whenever you meet him on the street. Even if he may cause some little worry wrinkles deep down in your heart, keep them out of your face. Don't disparage his work, for nobody has ever yet succeeded in business by trying to build on the shortcomings of another. Let your own ability be the corner stone of your business. If Jones captures one of your regular customers, don't kick at Jones, kick yourself, for in nine cases out of ten the blame lies with you. We often have reason to be thankful that we have a competitor for some of our customers to patronize occasionally. It gives us a rest. Not long ago while visiting my friend, Mr. Gardner, in his studio, I found him busy with one of my customers. It made me feel good and I congratulated myself after getting outside. Since then one of my worst worry wrinkles has changed its headquarters; you can find it now on Brother Gardner's face.

The best eradicator of wrinkles that I know of is the almighty dollar. The jingle of a handful of the needful in one's pocket is better for this purpose

than a whole hypo-tray full of Robertine, especially if the tinkle-tinkle is sepia-tinted.

This brings us again to the practical part, the business side of our work, for if we are successful in our business we will have money in our pockets with which to buy bread and meat to make us healthy and happy, and a healthy, happy face is poor soil for wrinkles. Always lay aside enough during the year to ensure an annual return to these conventions. I sincerely believe that the practical lessons taught here along all lines of photography, repay us a hundred fold for coming. I also believe that the Photographers' Associations of our country and their influences have done more to educate and elevate photographers in their business standing than anything else during the past quarter of a century. One thing is certain, photographers as a class are more highly respected and in better standing in the eyes of the public than they were twenty-five years ago. You have all heard the story of the Irishman who, while passing through a cemetery, saw a tombstone with this inscription engraved upon it: "Here lies William Smith, a photographer and an honest man." "Be jabbers," said Pat, "two mans in the same grave." I am thankful that such an inscription on a brother's grave at this date, would not cause the suspicion manifested by Pat. There is no question therefore but that we, as a *class,* have been benefited by our conventions. What we want now is that we, as *individuals,* may derive every possible benefit during our attendance here. This brings up the question of another kind of wrinkles, the kind we all like to have and want more of, the many little ideas, suggestions, helps, or in a word, *wrinkles* practised at home by our different members, which if explained here would help many of us over some of the rough places along the photographic highway. I have no doubt that every member here knows of some such wrinkle that would be new to many and my object in choosing this subject is to encourage an expression along this line from each of you. In order to start the good work I will, with your permission, mention a few wrinkles I have found to be of practical benefit to me in my every day gallery work. These will be an old story to many of you, but if any one in the hall can derive benefit from my wrinkles I will feel repaid for mentioning them.

Washing Trays

I have been a photographer for a good many years, but I did not know how to make a durable oilcloth washing tray until I learned how at the Salem Convention three years ago. I made a set on my return home and I have been using them continuously ever since. This little model I have will show you how simple is the process of making them.

Cut the material for the tray to be when finished about twenty-four by thirty, and four inches in depth. Nail the bottom boards on the sides, leaving the ends to be fastened on after the oilcloth is properly fitted. Next turn up the edges of the cloth so that it fits snugly against the sides and bottom of the tray, then, turning up the cloth at the ends, draw the corner laps or ears out past and around the ends of the side pieces. Nail on the end pieces with these corner ears still on the outside. The usual way is to fold these laps inside the tray.

A CHILD PORTRAIT
By J. C. STRAUSS

By this better method there are no projecting corners left inside the tray to be shortly worn through, causing all kinds of trouble and bad language.

Spotting Prints

We all know what a tedious job is the spotting of photographs for delivery, and how difficult it is to put on just enough color to cover up the defects. Most photographers use india ink and watercolors, put on with a spotting brush. I have all these things at home but seldom use them as I find that the quickest, simplest method is to use a carbon pencil, a Conte, similar to this one I am showing you. These pencils can be secured from any art store in varying degrees of hardness. I get the most satisfactory results from a No. 2. Try one and you will seldom pick up a spotting brush in the future.

Fixing Bath

I used to be bothered a good deal keeping my fixing bath clear and in good working order. Some photographers make up a fresh bath every day, but some of us are in the habit of using the same bath as long as it will not float the negative. I now make up my bath as follows:

Hypo dissolved in two quarts of water.....1 pound
Sulphite of Soda.....One-half ounce
Acetic acid, No. 8.....3 ounces
Alum, pulverized.....One-half ounce

This remains clear for a month or more and will harden the film sufficiently to prevent frilling or blistering in the warmest of weather.

Intensifier

About fifteen years ago an old time photographer gave me a formula for an intensifier. I have tried a number of others since but have found nothing any better. Being a one-solution intensifier it is easily worked. It is made up as follows:—Dissolve sixty grains of Bi-Cloride of mercury in six ounces of hot water and add a solution of ninety grains of iodide of potassium dissolved in two ounces of water. The result will be a brilliant red solution caused by the precipitation of red iodide of mercury. Then add slowly just sufficient of a saturated solution of hypo to re-dissolve the precipitate. To use, simply flow the negative till sufficient density has been secured, then immerse the negative a few moments in the fixing bath. This prevents yellowness of the film. Care must be taken that the negative is washed thoroughly free of hypo before intensifying.

Reducer

There are any number of formulæ for reducing negatives, but to reduce the highlights in a negative without cutting the shadows, is a trick that many operators are not familiar with. Try the following and you will get some beautiful effects from negatives that otherwise would only be fit for the refuse barrel:

Solution A.—Permanganate of potash.....24 grains
Water.....1 ounce.
Solution B.—Sulphuric acid.....24 minims.
Water.....1 ounce.

A FAMILY GROUP
By J. C. STRAUSS

For use mix one drachm of A, two drachms of B and eight ounces of water. This acts very rapidly and care must be taken or the reduction will proceed too far. To cut out the little stain left after using the reducer, immerse the plate a few moments in the fixing bath.

Home-Made Mounts

In the city where the photographer has only to go a few blocks to reach a stock house, there is little if any bother about procuring any style of mount suitable to fill almost any kind of a special order. From my own experience I know that the country photographer is often up against a hard proposition when he has an order from an exacting customer, especially as to mounts. I have often booked an order that I would have otherwise lost by showing a simple home-made mount with deckle edge insert; besides getting a little advance over prices previously quoted. These mounts are especially adapted for platinum or other non-curling papers. Five and eight ply card board in a variety of tints, as well as variously tinted cover paper, can be procured at any of the stock houses. In making the mount, select a tint of card and insert that will harmonize with the print to be mounted. Cut the card panel shaped, about 7x11 for cabinet prints, and cut out a card board form or die, one-quarter or three-eighths of an inch larger each way than the print. Emboss the mount by placing the die and the mount together face downward on a smooth table or pane of glass and with an embosser follow around on the back of the mount, the edge of the form underneath. A knife handle, tooth-brush handle or any similar article will do for an embosser. Cut the insert a little larger than the print and deckle the edges by bending them, in turn, over the edge of a board and simply cutting through the paper with a wood rasp. Brush a little glue around the edge of the insert and attach to the mount and it will be ready for the print. Place the finished picture under pressure for a short time and it will be ready for delivery. (During this description the speaker made up a mount complete.)

These few wrinkles apply particularly to the work of the operating and finishing departments, but we should always be on the lookout for reception-room wrinkles, for it is in the reception room that the dollars and cents are handled. In my opinion the most experienced person in the studio should be in charge of this department.

About eighteen years ago I entered into a contract with the lady who looks after my reception room, and in return for services endowed her with all my worldly goods. Like all other husbands I am really the head of the family, but of the numerous occasions on which I take a back seat the handling of customers is one. Many a time when dealing with a cantankerous patron, I have been compelled to retire to the sanctity of my dark room to commune with my bottles and trays; but she seldom fails to book an order or send away a customer rejoicing. The ladies seem to take more naturally to this work than we men. They have more tact and patience and can more gracefully accommodate themselves to the whims and caprices of the general public. During a visit to Portland last winter I was talking with a well known photographer there upon this very subject. He said my argument was all right, but that there was such a thing as the

reception-room lady being entirely too accommodating. "We always keep our studio closed on Sunday," said he, "only opening the door for engagements. Last Sunday Attorney Brown, who lives out at Mt. Tabor, came in on the street car after some proofs of his wife's portrait that we had promised to have ready. He was suffering with a bad cold when he left home and coming in through the cold and fog he became so hoarse that he could not speak above a whisper. Reaching the gallery, he knocked at the door and when my jewel of a reception-room girl opened it, in response to his hoarsely whispered inquiry, 'Is the proprietor in?' she whispered back, 'No, come in.'

In conclusion, I would urge you to keep your reception room bright and clean in every way. Have everything looking so neat and attractive that the passer-by cannot help but step in, even if no work is wanted. A prospective customer in the reception room is better than a dozen on the street. Therefore you should use every means to attract the public to your studio. Keep the leading photographic magazines on your center tables, such as *Wilson's, Photo Era,* and others, and especially do not overlook the CAMERA CRAFT, our official journal. Show case displays should be changed at least once a month and it would pay to re-decorate the reception room once a year. If you find that you have run out of ideas along this line, give an expert a good sum for some new suggestions. Do all this and your visitors will be impressed with the fact that you are up-to-date and understand your business. The first impression is what counts. Let the first impression as to your ability, as evidenced by your reception room, be of the right kind and you will have no trouble in getting customers. Make a study of this oftentimes neglected branch of your business and you will have mastered a wrinkle that will help greatly to keep the wrinkles out of your pocket books.

MEDITATION By M. A. VANCH

A STUDY
GUM PRINT
By ANNIE W. BRIGMAN

Reception Room Methods

By Sue Dorris.

An Address Delivered before the Sixth Annual Convention of the P. A. of the N. W.

Returning from a little sojourn at the coast a few weeks ago, I stepped off the train at one of our neighboring stations to get a little fresh air, when much to my grief I ran straight into the arms of trouble. The voice of our worthy Secretary gave me greeting and further assured me that he had been telephoning all over the country for me. Immediately all my past and present sins arose before me and I wondered what I had done, and when Mr. Emery had been appointed a detective. He then proceeded to inform me that I was on the convention program for a talk. Had I been handcuffed on the spot I should not have felt more taken in. "Oh!" I said much relieved at a possible chance at escape, " I'm very sorry, but I shall not be in attendance this year, and I won't possibly have time to prepare a paper."

When a few weeks later, after I had quite forgotten this occurrence, I received a program announcing my talk, I straightway had a chill, (not an uncomfortable sensation for August however). I tried faithfully to spare you this infliction, but Mr. Secretary doesn't let go as gracefully as he might. So being somewhat of a philosophical turn, I decided, with Shakespeare, that "Things without all remedy should be without regard, what's done is done," and I'd better get to work.

If I were to preface my talk with a quotation epitomizing the whole, as near as I could find it, it would be those lines from As You Like It: "Oh how full of briers is this working day world." For, were there ever so many found in any other place as in a reception room.

But there are reception rooms and reception rooms, you know, and I was thinking of the first one I was ever in. There are many just like it. Of my own I think I can say I have the minimum of briers. I have discovered that *we make nearly all we find.* Few workers of the camera craft, I believe, really appreciate how nearly reception room methods come to being the key note of success in his or her business. There is no doubt but business is made or marred there.

A prerequisite, first of all, to good methods and management must be a good reception room attendant. Whether this person be a man or woman, whether you are your own attendant or hire one, the place calls for certain qualities that must be recognized as absolute essentials.

And what may we consider as practical and ideal characteristics necessary in a good attendant? I am not sure but that I would put *cheerfulness* first. That agreeableness to one's customers at all times and under all circumstances, together with an affable manner and a polite address, that immediately sets a patron at ease; an *atmosphere* that draws to, rather than repels. Do we half know the power there is in such an atmosphere? Fra Elbertus says, "We arouse in others the same attitude we hold toward them." This is truer than we half suspect. Strauss's shop maxim is one we should all keep ever before us. "Courtesy to

customers is a commodity never cheapened by over supply." If you are sour and of a grouchy disposition yourself, don't, by all means, ever come into your own reception room. Hire some one else to do that work. It will pay a thousand times. You are an incompetent there.

The receptionist should have a good education, be versatile and a good conversationalist, able to shut people up who talk too much and draw out those who talk too little. In short she must have a strong personality, must this person who is to successfully manage the common and the uncommon people with all their whims and vanities. She must know the business from A to Z and be conversant with all branches of it, working in harmony with every employee in the studio, never making any promises to customers she does not expect shall be faithfully carried out. Such a person if hired, I think, should be so competent as to receive a salary not less than the operator himself. The position is of sufficient importance to demand and justify it. And if by skillful and tactful methods she is able to corner a larger fee for her employer than common, she should receive a commission, but no such policy should ever be employed or encouraged, I should say, if the interests of the employer were sought at a sacrifice of the customer's interest. No such course would commend itself to the wise and honest business man.

There is an advantage, I think all of you will admit, in being one's own operator and receptionist, for the reason that an idea originating under the skylight, can best be put before the customer, and unless perfect harmony of ideas is the case where the receptionist is a second party an idea can never be carried into perfect execution and the customer is often left with a feeling that the work has suffered by passing through too many hands.

Neatness in the person of the attendant and her realm, goes without saying, but how often the reverse is found, much to the sorrow of the business, and old faded, shabby displays covered with the dust of centuries, that speak of other days not far removed from Daguerre's time, are still extant, monuments of their owner's bad business judgment and lack of business foresight.

There are times when the attendant must not be far removed from the mind reader. An amusing incident occurred years ago that I shall never forget. A country swain and his bride came in one day, and such verdure as these two displayed is still not uncommon to the country town, and while waiting upon them I caught the idea, from a very slight suggestion offered and their shy, hesitating manner, that they wanted something special. The swain said "would you make another negative and make just one print from it?" "To be sure" I smilingly replied, "anything you want." They looked delighted and seemed to feel that I understood their case, though nothing further was said as to what the special picture was to be. I made several negatives for the full order, then I said "now while I change my plate, you may arrange yourselves for the special," and I fled chuckling into the dark room.

I was not in the least surprised when I returned to find *madam* sitting on his lordship's knee, one arm around his neck, their other hands clasped and looking rapturously into each other's eyes. I smilingly remarked "that looks good, jolly good" and make a few mental comments worthy a bachelor such as

HON. JOSEPH WINGATE FOLK
GOVERNOR OF MISSOURI
Copyrighted 1905
By J. C. STRAUSS

—O Bliss that knows no ending" (with a question mark after it) and "where ignorance is bliss, 'tis folly to be wise," and the like. This was certainly the most refreshing experience I had ever had and one from which I gained a few pointers. They left delighted and I half believe they thought me a rather kind human being. And I am confident I should have lost that order if I hadn't tumbled without an explanation, for they simply were too shy to explain. The intuitive faculty must be well developed in the one who is to handle people of all kinds and temperaments, all stages of civilization and all degrees of education.

If I were to realize a studio which to my mind I should consider a model, it would be as like a cozy home as I could make it. A place in which all classes might feel at ease the moment they entered. It should be quite free, at first appearance, from any semblance to a studio, except for a few choice prints from the masters, such as my patrons and I might always associate with, to our profit. My work should be shown in portfolios or carefully laid away in table drawers as though it had some value. Not scattered about in a mixed mess like bargain counter goods. No wonder customers expect 98 cent methods of display to indicate cheap work.

The proof question is one that has often been discussed, but little has been said of the quality of a proof, which to my mind is of no small importance. Where prices justify, it seems to me that at least two or three of the best positions, in the judgment of the operator, should be submitted finished. I have seen proofs from studios of high repute in Oregon, Washington and elsewhere that were no credit to the studio turning them out. I believe all good negatives should be proof retouched. I consider I have saved myself innumerable resittings by following this simple plan. Customers as a rule do not know how much a negative can be improved by a few touches here and there or in how far an expression that must pass for bad can be made very good. A little frown between the eyes that quite kills an almost smile in the mouth, if removed, will often leave a fine expression. This plan is also an excellent way of getting one's own choice accepted, I find. The judgment of the worker ought to take precedent here and it will, everytime, if rightly managed. Often one has a perverse customer, one who would select the worst things in the batch, and the way I manage such is to nip their inclination in the bud by never showing a proof of the worst negative. All proofs should be first approved by oneself, then submitted.

The business side of our work is too often apt to be neglected in our attempts to perfect the result and give it the touch of art. And the fault lies in the reception room, as a rule. The system of requiring a deposit at the time of sitting is quite common, but we do not register a sitting and get a deposit before the sitting, even on appointments. I believe our so doing ought to be a commonly understood and practiced rule with the profession. In the case of an appointment, I would suggest a neat ticket which amounted to a receipt, bearing upon it the time of appointment, serving likewise as a reminder. Why should a customer expect work done without such a guarantee any more than a tourist should

expect to go to the end of his journey without having purchased a ticket? The railroad could not do business that way, why should we expect to? We have the same people to deal with, only we allow them to expect services at any and all times, free; and if they are not there on time, no matter how much it may discommode us or lose sittings for us, we are at their command. Do we not need a new business code on this point, one that shall favor the photographer more?

Our profession, as a profession, will never hold the rank it should as compared with other professions that command not half the possibilities of dignity and worth to humanity that ours does, until we raise it through new business methods. These must be instituted where we come in closest touch with the public, in the reception room. The rest of the work about the studio has its share in this, but the reception room is most conspicuous to the outside world and bears the same relation to the work behind the scenes as the face of a clock to its interior arrangements. There can be no lies or deceits practiced there. If the works are in good order, running neither too fast nor too slow, the face will declare it. If not running true it will be little use for the face to declare falsely. The public can't long be fooled. The worker who fails to give the impression in his reception room that he is in the business, not exclusively for the money there is in it, but that far more worthy end; because he has a pleasure in his work, a joy that must express itself; does not deserve the respect of his patrons. This reminds me of several instances in which coupon men have remarked to me: "What are you in business for, not for your health, I hope?" I always reply, "Yes, thank heavens, I believe I am here for my health, after all." For when through my business methods my business integrity suffers in the community, my health must suffer also. For like the Duke of Norfolk, "Mine honor is my life both grown in one, take honor from me and my life is done." So I think after all I like to say I'm in the business for my health.

I was amused at a little incident which occurred a few weeks ago. A friend who located in Southern Oregon was telling me of a visit she had had from one of these business philanthropists, the coupon man. She told me that when he found she did not take as gracefully to his scheme as he thought it deserved, he very abruptly replied: "Miss Dorris has been talking to you." I took this as a compliment and felt quite like a missionary, although I am not responsible for the lady's opinion, for she has high ideals of her own. We must use dignified methods or be content to hold no rank as a profession.

I would heartily recommend the method I am at present pursuing, especially if, like myself, you are in the business for your health. While I must confess it has the ear marks of originality, to my mind it is a capital disposition of the question. It is this—tack a card on your door bearing the following inscription: OUT OF TOWN FOR A FEW DAYS, and then hike for the tall timber post haste. The reception room will take care of itself, never fear. This may be a questionable policy to some of you, but those who do their own reception room work, I think not.

Seriously, I find I do not know how to approach people until I have left them for a time and associated with trees and birds and swift running waters.

In other words got near to nature's heart. There is a truth here too deeply psychological to follow up in this brief talk, but we would all do well to think upon it and learn to value its meaning in our daily work and contact with that complex organism known as humanity. This method I have never followed before and may never again, but no one will ever question the importance of a vacation. Take it, however, we must.

But there is a discussion to follow this and it is not my purpose to plow over the whole ground. So in closing let me say: I think Mr. Emery would make a capital reception-room lady, because he has the divine quality of always getting that for which he asks. He requested a paper from me and I protested; he then begged for a skeleton. So, dear friends, if you do not like my skeleton, give it a decent burial beyond the borders of your memory. If, however, it be any profit to you, I am well paid. I thank you for your patient attention.

News of the Northwest

George E. Crump, manager of the art department of the Spokane Interstate Fair, Sept. 24 to October 6, announces there will be a contest for amateurs only, with prizes aggregating fifty dollars. There will be four classes: Landscape, marine, animal and portraits, with an additional prize of ten dollars for the best collection.

Major Lee Morehouse of Lewiston, Idaho, the noted photographer and writer of Indian history, has gone into the Nez Perce country in Idaho to secure photographs of the red men at their annual celebration. Major Morehouse has headquarters at Pendleton, Ore., but passes much of his time on the Indian reservations in the Spokane country. He has more than five thousand negatives, showing the red man's progress in the last half century.

Milton Loryea, one of Spokane's prominent photographers, who has just returned with Mrs. Loryea from an extended trip in the eastern states, declares that half a dozen of the studios in this city are doing work which will compare favorably with anything he saw during his tour. Photography has made remarkable advances in the last few years, he added, and Spokane is not in the least behind.

The Pacific Northwest now has a board of photograph critics. It is composed of John Savannah of Victoria, S. J. Thompson of Vancouver, J. C. S. Aune of Portland, A. J. Jackson of Tacoma, A. F. Muir and C. H. Butterworth of Seattle, and Milton Loryea of Spokane. The headquarters are in Spokane.

Photography on the Bay

By W. Rob. Whyte.

SUNSET OVER GOAT ISLAND

AFTER the terrible scenes of which our cameras have been, in their own peculiar way, such faithfully recording eye-witnesses, it is with a sense of unalloyed relief that one turns to the soothing sunsets and cheery shipping views that have been taken during a short course of years while crossing that reservoir of health to weary brains and eyes, the beautiful Bay of San Francisco. Crossing the Bay at all seasons of the year, it has often been a matter of surprise that my own little camera was the only one at work on beauties of light and shadow that made one long for that experience and technical knowledge that surely were all that could be required to turn their photographic representation into veritable works of art. Perhaps the average business man, deeply engrossed in the modern alchemy, in the commercial transmutation of metals, does not see what is constantly passing before his eyes—his mind is elsewhere: and it may also be that what we see every day of our lives

FOG ROLLING IN THROUGH THE GOLDEN GATE

CLOUDY SUNSET ON THE BAY

becomes at last uninteresting, and we only truly see what we are actively looking for.

There is a great deal to be learned from the constant use of the camera, not the least being the cultivation of our powers of observation. This reminds one of the quaint old Scotch professor who soundly rated his students on their negligence in this respect.

"Gentlemen, ye are sairly lacking in your pooers of observation;" where-

SUNSET OVER THE CITY

MORNING ON THE BAY

upon he dipped a finger in a bowl of dark, treacly-looking stuff, licked his finger and desired the students to follow his example and say what they thought of the decoction. The wry faces of the students testified to its unpleasant flavor.

"Gentlemen," said the professor; "if ye had cultivated your powers of observation, ye wad ha' obsairved that the fenger I dippet in the bowl was not the fenger that I pit into ma mouth." And so with photography; it is the observation of the little things that makes for success.

AFTERNOON ON THE BAY

SUNSET ON SAN FRANCISCO BAY

This lack of observation of small details has been frequently shown in the comments of onlookers when my camera has been pointed at a sunset on returning late in the evening from the City.

"Guess you can't make anything of that, it's too late in the day, not enough light to take a photograph by;" not observing that the reflected light from the water just doubled the available quantity. "I thought you could not take a photograph looking straight at the sun;" not noticing that the sun was red or orange hued looking through the haze of the Golden Gate. Then in the morning, looking eastward, it has not been noted that the sun's disc has been

STUDY IN SMOKE—EARLY MORNING

excluded from the scene and the centre of the picture at least 45 degrees from the incident of the direct rays. One is occasionally caught napping, and the developed negative is marred by a dark disc on the water, which of course means that the attention has been too exclusively fixed on the scene, and you long to give yourself a good kicking for neglecting to observe the little things.

Many amateurs again show their lack of observation when they take a batch of what they expected to be valuable exposures to be "developed free." In the way of business did you *ever* get something (of any value) for nothing? If your films or plates have been correctly exposed, you surely expect the negatives to be of some value. Then why run the risk of losing their value through bad or indifferent development? If you cannot do the developing yourself, get it done by someone whose charges enable him to do it honestly. How can you learn whether your exposures have been correctly made if your negatives are developed "anyhow?"

But why not "do the rest" yourself? If you will but use your powers of observation on the formulas and instructions given by the makers of films and plates, and subscribe to "Camera Craft" and read it carefully month after month, you will obtain more enjoyment from photography, learn more valuable lessons in the devious ways of subtle Dame Nature, and in fact give your mind a more thorough training in the acquirement of that all important mastery of detail in the observation of little things than by the lazy practice of merely "pressing the button" and letting some other fellow throw your pet films into a bucket of dirty, dilute developer to come out as best (or worst) they can.

Use a pyro developer for your films. It will not take much observation on your part to know why, if you afterwards do your own printing.

ON THE RIVER ARNO NEAR FLORENCE, ITALY By E. SHELDON PENNOYER

Stereoscopic Pictures with a Single Lens

Herewith is reproduced a stereo picture sent us by A. J. Snow, founder and secretary of the United Stereoscopic Society of Great Britain. He refers us to an article describing his methods in the *Optical Lantern and Cinematograph Journal*, for particulars as to how such stereoscopic pictures of still life subjects may be produced with an ordinary camera using but one lens. Removing the back from the English half-plate or the slightly larger 5x7 camera there will be found in most cases a recessed strip across the top and bottom of the front.

A piece of black card cut out just half the width of the opening in the back and just long enough to fit snugly, touching top and bottom as shown in A, is placed in position and the back replaced. The object is focused on the half of the ground glass not protected by the black card, the holder inserted, the slide withdrawn and that end of the plate exposed. The slide is replaced, the holder withdrawn, the back removed and the card slid along to the other side. The entire operation is then repeated after swinging the camera just enough to bring the object on the other end of the focusing screen and of course on the corresponding end of the plate when the second exposure is made. This second exposure for the remaining end of the plate should of course be timed exactly the same. This method will be found particularly satisfactory for still life subjects such as flowers and the like which are photographed at a short distance. All that is required is a little care and excellent results will be secured. If the picture made by this method which we reproduce is examined in a stereoscope it will be found that the relief is not exaggerated nor yet lacking in stereoscopic effect.

The Sixth Annual Convention of the P. A. of the P. N. W., Masonic Temple, Spokane, Washington, Sept. 5, 6, 7 and 8

The excellent addresses which were delivered before this most enthusiastic gathering of photographers at Spokane justify us in giving so much space to the several which we are able to report. For that reason we trust that the members of the Northwest Association and their friends will forgive us for the briefness of the report which follows, space not permitting as full a report as we would like to give.

Elaborate as were the announcements made in the program which was sent out some weeks before the opening of the convention, all were agreeably surprised to find everything ready and the most careful preparations made to insure the carrying out of every detail, when, Wednesday morning, Exhibition Hall in the Masonic Temple, was thrown open. The day was given over to the final arrangements of exhibits and to getting acquainted. Owing to the fact that this was the first convention ever held in the "Inland Empire," many new convention visitors were in evidence, and those, together with the large number of older members, assured from the beginning a successful gathering.

Thursday morning there was a busy time at the Secretary's desk, members paying dues and securing the new Association Buttons. These were made after a model submitted by Vice-President Loryea of Spokane and consisted of a miniature lens with letters P. A. P. N. W. engraved on the flange. At 2 p. m., the convention was called to order by President John Savannah, who, after a few remarks, introduced Mayor Floyd L. Daggett, who delivered the Address of Welcome. He praised the spirit in which the convention was held and assured the assembled photographers the support of the city in their work. President Savannah then addressed the convention on "The Good of the Association." During his remarks he advocated radical changes in many of the business methods pursued by photographers and voiced his belief that the photographic art is still in its infancy. At 8 p. m. the meeting was again called to order, and after reading the minutes, a most excellent paper by Miss Sue Dorris of Eugene, on "Reception Room Methods," was read by the Secretary. Owing to business engagements Miss Dorris was unable to be present. Following this was a general discussion participated in by a majority of the members present, the session lasting until 11 p. m.

Friday, September 7th at 9 a. m. President Savannah announced that there would be a continuous demonstration carried on in the Hall during the convention by the Aristo people and others present. This part of the program was most faithfully carried out, the work of Mr. Robert Smith with the electric lamp being particularly interesting to the members. Reading of minutes was dis-

pensed with and Ex-President Jackson delivered an address on the subject "Under the Skylight," illustrating his talk with diagrams of single and double slant-lights. Following this, Vice-President Loryea gave an interesting description of his visit to the National Convention at Niagara Falls. During the afternoon session the selection of officers for the ensuing year was made, the election resulted as follows: President, W. G. Emery, of Vancouver; Vice-President, George Braas, of Seattle; Secretary-Treasurer, O. W. Pautzke, Ellensburgh; Vice-President for Washington, E. A. Lynn, of Tacoma; Vice-President for Oregon, R. T. Parker, of Baker City; Vice-President for Idaho, J. W. Gomond, of Lewiston; Vice-President for Montana, F. M. Ingalls of Missoula, and Vice-President for British Columbia, Skene Lowe of Victoria. Mr. Edgeworth of the Bausch & Lomb Optical Co. of Californnia was introduced and delivered an interesting technical lecture on lenses. His remarks were illustrated by a series of charts, and were a clear and practical explanation of the construction of lenses of every description.

At 7:30 p. m. over one hundred members had assembled at the silver grill of the Hotel Spokane, and marching into the banquet room found it darkened with the exception of a score of ruby lanterns hung about the walls. At a signal from President Savannah the lights were turned on. One hundred and thirty knights of the camera were seated around the festive board, thoroughly enjoying the menu, from the first entre, puree of pyro, to the cheese and firecrackers, the last being W. Dixon Bell's term for the addresses. Mayor Daggett was introduced and favored those present with an inspiring address on the subject of "Fraternity." President Savannah, as toastmaster, then called up in turn many of those present. Messrs. Jackson, Wing, Graham, Shaw, Paige, Gomond, Gifford, Lynn and Smith spoke on various topics. A rousing song closed the evenings entertainment at midnight. Milton Loryea, in behalf of the Association, presented President Savannah with a handsome silver stein and Secretary-Treasurer Emery with a silver mounted ebony loving cup.

Saturday, September 8th, the meeting was called to order at 9 a. m., and after the reading of the minutes, the assembly was treated to a most excellent address by Mr. L. D. Hicks, of the Artura Paper Co. His remarks on "The Bread and Butter Side of Photography" were presented in a clear and forceful manner. Secretary-Treasurer Emery followed with a practical talk on "Wrinkles." Following came the selection of the next convention city. A telegram was read from the Secretary of the Board of Trade of Seattle inviting the Association to that city in 1907. On motion of Skene Lowe of Victoria, seconded by Lee of Tacoma, Seattle was made the unanimous choice of the Association. After a general discussion of Studio methods, the convention adjourned to witness a skylight demonstration at the studio of Miss A. C. Libby.

The final session began at 1:30 p. m. The meeting being called to order and after reading of minutes the report of the Auditing Committee on Ex-Secretary-Treasurer Butterworth's accounts was read. The committee found the accounts correct and O. K'd the balance of $86.67 as turned over to Secretary-Treasurer Emery. A report by Secretary-Treasurer Emery was then read

THE MEN WHO MADE THE CONVENTION SUCH A GREAT SUCCESS

W. G. EMERY
Secretary-Treasurer

MILTON LORVEA
Vice-President

T. J. CHERRINGTON
State Vice-President, Oregon

O. A. GREGORY
State Vice-President, Montana

JNO. SAVANNAH, President

JOHN FINK
State Vice-President, Idaho

S. J. THOMPSON
Vice-President, British Columbia

J. B. HANN, State Vice-President, Washington

showing an estimated balance on hand at the close of the year of $140.00. On motion of A. L. Jackson of Tacoma, CAMERA CRAFT was made the official journal of the Association. The Committee on Certificates of Mint reported the following exhibitors as worthy of this award: A. L. Jackson; E. A. Lynn; Harry Coombs, of Tacoma; Wills & Moon and Lynn & Cram, of Seattle; Loryea, Wing, Angvire and W. Dixon Ball of Spokane; Moore, Aune and Grove, of Portland; Emery of Vancouver, Wash; Corvallis Studio, Corvallis, Ore.; R. T. Parker, Baker City, Ore.; J. S. Wheeler, Pendleton, Ore.; Miss Ada Rousch, Goldendale, Wash.; Jas. Milner, Garfield, Wash.; Joslin, Palouse, Wash.; E. U. Springer, Kelso, Wash.; Jno. Savannah, Victoria, B. C.; A. A. Paull, New Westminster, B. C.; F. A. Ingals, Missoula, Mont.; Hawes, Butte, Mont.

The Souvenir Committee selected eight pictures from those on exhibition to constitute the official exhibit of the Association, these to be reproduced seriatim in the official organ of the Association, CAMERA CRAFT, as follows: Platinum print by A. L. Jackson of Tacoma, "Old Man Hansen;" platinum sketch water color by C. Elmer Grove of Portland, "Lady and Roses;" sepia carbon by Moon & Wills, Seattle, "Portrait of Lady;" sepia carbon by W. G. Emery of Vancouver, "The Summer Girl;" velvet velox by Milton Loryea, "The Bride;" sepia platinum by E. A. Lynn of Tacoma, "Portrait of Daughter;" sepia platinum by J. S. Wheeler, Pendleton, "Grandfather and Child," and black and white platinum by J Savannah, "Portrait of Lady."

Saturday afternoon after the close of the convention, the members were treated to a tour of the city in the trolley observation car, as guests of the Spokane Board of Trade. During this last afternoon the exhibit hall was thrown open to the public and crowds of Spokane citizens spent the afternoon inspecting the work of members on exhibition. Saturday night the members attended the Washington Theatre en masse.

The Convention was a success in every way, excelling even the best of the former ones. The attendance was larger and the interest and enthusiasm displayed was a most gratifying recognition of the hard work which the retiring officers had done to make the gathering a banner one. All those present are to be congratulated and it is quite evident that they have only to be assured that the next convention will approach the one just closed in order to secure their attendance, so well pleased are all who were in attendance.

His Initial Visit

L. L. Cossitt is now covering the territory, including Denver and the Coast, in the interest of Burke & James, of Chicago. While Mr. Cossitt is somewhat of a stranger to us, he is making friends of the entire trade in this section. He has been connected with the photographic trade for a very long period, and is well known and highly esteemed in the East, and particularly in Chicago, where his activities have been mostly exercised. He reports business as very good, and if popularity is of any avail, he will no doubt secure many large orders for his house, even on this, his initial trip to this territory.

The Demonstrator Talks

By Charles S. Ogilvie.

Eastman Speed of the Film

THE BATHER By A. J. SWANSON

TALKING with the dealers as I do every day of the year I find that their hardest work comes in trying to convince their customers that they will not be sacrificing speed by using films instead of plates. Now that Todd of the *Beacon* and the author of the well known exposure tables bearing his name has publicly announced the fact that he has found the Eastman film as rapid as the plates in fastest or O class, their work should be easier. This reminds me that I met his son, Eric, who is touring the Coast, and the conversation turning to his father and his work I was interested to learn of that hard-working Scotchman's thoroughness in the matter of securing data for the compilation of this new exposure card. Days were consumed in making exposures and plates used by the gross. While the son is interested in photography only to the extent of using a pocket kodak for making memoranda of his travels, when the subject of photography is brought around to his father's work he convinces one that his modest description of the work involved in securing data acceptable to the author of the Photo-Beacon Exposure Card is no small undertaking. But to return to the matter of the Eastman film, I have always wondered why there was any question as to the speed. Some of the fastest plates I ever used and plates that were particularly pleasing for the reason that with their speed they had little of the faults inherent in most fast emulsions, were Eastman plates. If the firm can make such a satisfactory emulsion to be coated upon glass I can not understand why they could not coat it upon celluloid film as well. It is evident that they have been doing this right along.

Different Tones on Velox

Mr. Clute showed me some prints that he had received from one of his subscribers that were particularly charming owing to the effects secured by adapting the color to the scene. As they came out of his "MSS" drawer I imagine we will have something about them in "Amateur Troubles" this month. If I could show some prints that I saw recently I think I could convince him that there were other ways of carrying out the excellent idea of suiting the tone to the subject and in that way adding to the feeling of the picture. The prints

I saw were in the hands of a Velox demonstrator and were produced by following the directions given in the recently issued "Velox Book." Sepias, rich reds and fine blues were included. If I was an amateur photographer or rather, if I had the time to be one to some purpose, the first thing I would do would be to get well acquainted with these processes and then when I came to print from my summer's accumulations of negatives I could print those marines in a blue tone, the warm, sunlight subjects in a sepia and some interiors which suggest firelight and warmth, in red. A whole lot of subjects are not entirely satisfactory in cold black and white. With the range from soft to hard which one has in Velox and this added range of tone, a pleasing print should be secured from almost anything in the shape of a negative. As it is I am looking for a finisher who has mastered the very simple process of making Velox prints in a variety of colors. A lot of others will be doing the same when they see my prints. Either that or they will be getting one of the "Velox Books" and making them for themselves.

Preventing Halation

I was talking with a worker the other day who was most enthusiastic over a new plan which he had just tried for preventing halation when photographing an interior in which it was necessary to include a window. When starting to develope he has handy a small bottle of this stuff that is advertised in the magazines as "New Skin" for the exclusion of air and dirt from cuts and scratches. As soon as the outline of the window comes up he removes the negative from the developer, rinses it slightly, wipes off the surface water and applies to the part a coating of this solution. The negative is returned to the developer which can no longer reach the part and so excessive density is prevented. Of course development is not checked entirely as some remains in the emulsion and a hard line is not caused for the reason that the developer works in under the edge all around. If not enough development takes place it is an easy matter to rub up an edge of the coating or remove it entirely although this is hardly ever found necessary. This article is in the main a simple collodion such as is used in many corn cures as a vehicle for the salicycic acid and a like article for the purpose can easily be made by dissolving a little proxyline or gun cotton in equal parts of ether and alcohol. This method reminds me of a like method mentioned a few weeks ago by a writer in one of the English magazines. The worker holds a piece of tracing paper against the ground glass and sketches out the shape of such parts as are likely to show halation. With this as a pattern he cuts out pieces of sheet celuloid which are attached to the film of the negative as soon as their position is indicated by the appearance of the image. They attach themselves quite firmly to the film but are easily removed with a wash under the tap.

A Matter of Familiarity

One thing has struck me as being worthy of a good deal of consideration in trying to get the average worker to try something new and that is his unconscious inclination to believe that the methods and materials with which he

is conversant are the simplest and easiest to work. Most workers will tell you that they fear carbon printing for the reason that it is a difficult process and the same worker will go right on working printing-out paper through the whole list of printing, washing, toning, fixing, washing, squeegeeing and mounting as if it was all the most simple thing in the world. A like inconsistency was forced on my mind the other day while waiting in a store to get a few moments conversation with the proprietor. He had been showing one of the Kodak enlarging cameras to a customer who really needed one and needed it badly

PHOTOGRAPHS By JESUS VILLALPANDO

for the reason that he was doing nice work with a small camera and just the kind of work that would look much better in large sizes. He could not make the sale. It was too much trouble making enlargements and the customer was full of his conviction on the subject. The next man who came in was one who had done enlarging ever since the first manual was gotten out by the Eastman Company explaining the advantages of their bromide paper and telling how enlarging could be done with an ordinary camera. This man was so certain that enlarging was the only way to make prints that he had reduced

several of his large negatives to the size of his small ones so that he would not have to bother with a printing frame and the accompanying annoyances as he called them. And that is the way it goes. A worker should try and combat this inclination to avoid that which is different from their regular practice. Get one of these Kodak enlarging cameras and you will find yourself rapidly becoming a convert to the enlarging habit. Your prints will give you a pleasure that you never experienced from the small contact results, and better still, the convenience of the pocket form of camera will appeal to you even more than it does at present. Not only is the convenience great but for many classes of work the use of a small lens is a great convenience. Suppose you are out after landscape subjects and the day proves to be a windy one. Suppose you are after street scenes and the light is poor. Suppose a dozen other conditions in which a short exposure is demanded and at the same time considerable depth of focus is demanded. A small lens working at a large aperture will give practically everything in focus while a larger one only gives the plane focused upon sharo with a rapid falling off in definition both in front and behind. This is all right for some subjects but not for the greater portion of the amateurs' work. For portraiture it is well to have the focus confined to one plane. Photographs of single objects such as a horse racing or an athlete jumping are often better by having all else less sharp so that the one figure stands out well from its surroundings but in the case of street scenes, ordinary landscapes and the like, a greater depth of focus is demanded. This is secured without sacrificing speed only by using a small lens. With a small lens such as is used on the pocket Kodak and with a Kodak enlarging camera, the worker has an equipment that allows him the largest possible amount of success with the minimum amount of cost and trouble.

Some Repair Work

The recent advertising of Probus paint has brought it to the notice of many of the country photographers and one I met the other day is most enthusiastic in its praise. He has even gone so far as to give his entire dark room floor and the baseboard a coat, applied cloth while still wet and then coating again when dry. He says that he can now feel sure that he will not have to pay for any damage to the floor below, as his room is as tight as a bath tub. The door, which opens on to a back porch, would provide an outlet for an overflow as the sill is the lowest part unprotected. While Probus paint seems high in price, it is beyond doubt worth many times its cost. It gives entire satisfaction on account of its great wearing quality and it resists strong acids and alkalis perfectly. Using it one may make a very serviceable tray out of a cardboard plate box or its cover and by using strips of cloth as directed for covering cracks, any kind of a dry wooden box, no matter how open as to cracks, may be made into a good tray or bath. The cloth not only serves to carry the compound across the cracks, but adds greatly to the strength of the finished tray or bath.

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A PHOTOGRAPHIC MONTHLY

FAYETTE J. CLUTE, Editor and Proprietor

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The Convention at Spokane

Again it is our pleasant duty to report a convention marked throughout by enthusiasm, interest, good will, and a desire to improve the status of the individual photographers composing the body and the profession as a whole. Not only was the work of the officers having the matter in charge, an example of perfect arrangement and executive ability, but they received the hearty and generous cooperation of the members of their craft throughout the territory over which their association extends. As each year rolls around we can hardly help but wonder at the regularity with which these energetic members of the craft excell their past achievements, each new success seemingly making an improvement well nigh impossible. It is only through knowing them as we do that we can understand their determination to forge ahead in the matter of conventions. While our brief report conveys but little suggestion of the success achieved, the most excellent addresses and papers which are given in this issue will undoubtedly prove that all the high praise which we might give is due this organization of earnest and enthusiastic workers.

The National Convention at Niagara Falls

We must ask our readers to pardon us for not giving a report of the National Convention of the Photographers' Association of America which recently closed at Niagara Falls. The excellent addresses delivered before the Photographers' Association of the Pacific Northwest at their convention just closed are such that this magazine is more than willing to give them the space which makes it impossible to report the more important gathering. We will leave this latter work to our brother editors this year and trust that our readers will approve of our selection in the matter. As near as we can gather from a verbal report made by a gentleman in attendance at the National Convention, the papers read and addresses delivered were listened to with great attention and their points were favored with no little discussion. Because it is possible in some professions of a purely scholastic and artistic nature to bestow honors of an academic nature from an authoritative body upon those deserving, some enthusiasts present voiced their belief that the same can be done in photography, failing to realize that the aims of the painter, the musician and the like are somewhat different from those of the professional photographers, even were the

latter supplied with the proper university or academy. Nevertheless, the proposition to create an academy of photography was well presented and strongly upheld. Christian Science and its value as an aid in gaining the sitters' confidence was advocated; the fact that bright women as reception room attendants are hard to retain, owing to their inclination to acquire "the marrying habit," was deplored; the question of cost was ably discussed and business methods came in for the lion's share of attention.

Our Frontispiece this Month

This month's insert does not do justice to the handsome original which was displayed at the Spokane Convention for the reason that it was reproduced from an original on ordinary developing paper which did not give the value that was secured in the finished work hung at the Convention, this last being a sepia carbon transferred to a rich orange tinted paper, giving a wonderfully realistic sunset effect to the background. This was impossible as a copy for the photo-engraver for the reason that the rich warm lights secured by the paper used as a support for the sepia carbon image, would have come out weak and muddy even with the best efforts of our engraver. Photographed on an ordinary wet plate such as engravers use these lights would have reproduced so dark as to appear as shadows. Our readers will, for this reason, give Mr. Emery credit for a much finer result as his beautiful picture owed much to this remarkably realistic sunset effect for its charm.

Our Professional Friends

This issue of CAMERA CRAFT will have a wide circulation among the professionals of the West as it will go to every member of the Photographers' Association of the Pacific Northwest, the Photographers' Association of California, the Oklahoma and Indian Territory Association and several other state associations. Of those to whom the magazine may come as other than a regular visitor we would ask a close inspection with the encouragement of a subscription if found worthy. Our July issue contained several articles of a most practical nature which have been widely copied abroad. The last issue describes in detail the method of producing the wonderful results in colors which made the work of Mr. Curtis of Seattle such a striking feature at the last National Convention. Following issues will contain matter of value to every professional worker in the land. Should you doubt the popularity of CAMERA CRAFT with the better workers on this Coast, ask the first demonstrator you meet who has covered this territory and he will enlighten you as to the well nigh universal support which it receives.

Mr. Zimmerman's Article in our July Issue

This article has attracted a great deal of attention on account of its remarkable value as an important addition to the literature of development. It has been copied extensively by the foreign photographic magazines and has brought

us more letters of commendation than any article which has graced our pages for many months. For this reason we regret the more the necessity of admitting that it contains many errors that careful proofreading should have prevented. Several of these are purely typographical and of such a nature that they can only catch the eye of the critical reader. "True development" in the third paragraph should read "time development; in the ninth paragraph, eighth line, after "bromide," should be inserted "For D's effects, underexpose, and use normal developer, abundant bromide and full development," and in the next following line "ferricyanide-hypo intensified" should read "ferricyanide-hypo reducer increases." There are just twenty-four other mistakes in the article but they are such that they do not endanger the thorough understanding of the author's meaning. Mr. Zimmerman is entitled to all sympathy for the mutilation of his excellent manuscript, something which the Editor could not help under the disadvantages governing at that time.

Reports of the Conventions

We give in this issue a rather brief report of the Sixth Annual Convention of the Photographers' Association of the Pacific Northwest but feel that all the important matters are covered. We believe that many of the magazines are inclined to give more space than is necessary to such reports. In our own salad days as a worshiper at the shrine of the ruby eyed goddess of the darkroom we were disappointed regularly once a year by having but two or three photographic magazines to read, for the reason that all the others contained only the same matter as did one of the few selected for perusal, namely a full report of the doings of the National Convention. In those days the blare of the typographical trumpets with which many of the magazines announced these special or convention issues, led us to believe that the reports were secured by sending a special correspondent to the gathering in connection with an expert shorthand reporter, without regard to expense. When we found later that it was the practice of the officers of each recurring convention to send each magazine a neatly mimeographed report of every transaction including the full text of every address, so prepared that not even editing was required, the reason why the regular articles at so much a thousand words were crowded out, became less obscure. We of course would not wish to suggest that the humble attempts of our favorite writers to impart photographic information were of more interest than the facts that Mr. So-and-so rose to a point of order, but we believed that such work was of more interest than endless repetition of the statement concerning the point of order through several of the magazines. Our readers can feel assured that the pages of this issue of CAMERA CRAFT contains no matter that is common to all the others and that ready-made copy without cost is not an incentive to the bombastic use of box-car letters by this magazine..

W. G. Emery, newly elected president of the Photographers' Association of the Pacific Northwest, who has been located at Corvallis, Ore., the last five years, has arranged to open a studio at Vancouver, Wash.

Club Notes

Wisconsin Camera Club

The Wisconsin Camera Club was fortunate in having Mr. Edward J. Steichen on the programme for Tuesday evening, Aug. 21st, at the club-rooms, 623 Grand Ave., Milwaukee.

Mr. Steichen is spending the summer at Menominee Falls not far from Milwaukee and kindly consented to talk on Pictorial Photography before the Camera Club. The attendance was the largest we have had and never before in the history of the club was there a more forcible and entertaining lecture delivered. Mr. Steichen was at his best and explained the development of Pictorial Photography from its beginning to the present period. He compared Photography to Painting and the work necessary to become a pictorial photographer to the work necessary to become a painter. Mr. Steichen had on exhibition at the club, a generous collection of his work, and has kindly consented to honor the club with some of his work, this exception to his usual iron-clad rule being only made because of his love for his native city and the pleasure it gave him to be of some help to Milwaukee's enterprising Camera Club. After the lecture an informal reception was held so that all of Mr. Steichen's old friends might renew their acquaintanceship and club members might meet him.

The print committee has decided to have quarterly general competitions and a loving cup will be purchased as first prize to be given at the end of the club year.

Arrangements have been made for an exchange of prints and lantern slides with the Chicago Photographic Society.

Other clubs wishing to arrange similar exchanges with the Wisconsin Camera Club should communicate with the Secretary, Bernard C. Roloff, No. 810 Pabst Bldg. Milwaukee, Wis.

Knights of Camera Organize

Last night the members of the Denver Athletic Club organized a photographic department. H. C. Rubicam was elected chairman and C. A. Yont director of the lantern slide exhibitions. The club opened the newly built quarters, comprising a studio, reception hall, dark room, velox room, printing, toning, locker and enlarging rooms, all completely equipped with the latest apparatus.

At noon today in the D. A. C. cafe, the new department tendered a complimentary luncheon to two of the world's greatest photographers, W. H. Jackson of Detroit, and Edward J. Steichen of New York City, who met today for the first time. Mr. Jackson formerly lived in Denver, where he first began winning world's prizes for his famous scenic views. Mr. Steichen has won his prizes as an amateur portrait photographer.

Attending the luncheon were W. H. Jackson, Edward J. Steichen, Oliver O. App, George L. Beam, J. N. Bundick, George F. Clifton, Alfred Connor, B. Desjardine, George A. Green, George G. Duden, S. V. Hamley, Dr. A. H. Ketcham, E. R. Lunbeck, Stanley McGinnis, F. C. Nelson, Jay A. Robinson, H. C. Rubicam, Robert Slack, A. E. Stevens and C. A. Yont.—Denver Post, Aug. 10, 1906.

Photo Secession Exhibitions

September 10, 1906.

Members of the Photo-Secession:

The second series of exhibitions at the Little Galleries will begin November first. The first exhibition is to be devoted entirely to Member's Work. Every member has the privilege of having at least one print hung. It is preferred that prints be unframed, but mounted on mounts 14x22 inches; these conditions are not compulsory. Send prints intended for this exhibition by mail or express, prepaid: Photo-Secession, 291 Fifth Avenue, New York, N. Y., on or before October 15th.

This exhibition will be followed by monthly exhibitions of American and foreign work.

Alfred Stieglitz.

A Photographic Digest

By H. D'ARCY POWER, M. D.

All communications for this Department should be addressed to H. D'Arcy Power, M. D., Burlingame, San Mateo Co., California

Enlargements in Gum

In line with the matter concerning gum work in our last issue I must mention the work of Dr. Hiecke in Austria who has recently succeeded in making direct enlargments in multiple gum bichromate. His method is, first, to increase the sensibility of the gum mixture by coating some time before exposure; secondly, by permitting direct extraneous light to fall on the sensitive surface while the printing is going on. I have occasionally noticed that when a hopelessly underexposed plate is lying in the developer without any image appearing, if the actinic light be allowed to fall on the plate the outlines will often appear. Apparently the secondary illumination used by Dr. Hiecke must act in an analogous manner. He used an arc lamp in combination with a seven inch lens working at *f*, and for the supplemental light two thirty-two candle power incandescent lamps, one on either side of the print at a distance of about fifteen inches. Twenty minutes exposure sufficed for a good print.

The Personal Element in Time Development

Many workers now use the Walkin's System of factorial development which is dependent on watching for and noting the first appearance of the image and then multiplying the number of seconds by a number or factor which varies with the developer used but which is constant for any particular developer.

It occurred to A. Lockett, that different people might vary in visual activity to such an extent that among a number of observers, very discordant results might occur. For an account of the careful experiments he made I must refer the reader to the "British Journal of Photography" for June 15, but he summarizes his results as follows:—

"(a) What is called the personal element is of comparatively small importance in factorial development providing average care is used being in fact much less evident and less likely to cause variations in results than with the old system of judging density by inspection.

(b) A liberal allowance of light in the dark-room (of course nonactinic) is of the highest importance while watching for the first appearance of the image.

(c) Although a medium factor neither too long nor too short is probably preferable, there is practically no greater fear of variable results with a large developing factor than with a small one—given reasonable care in watching for and estimating the time of appearance.

(d) Some individuals are habitually quicker or slower in noting the emergence of the high lights than others but as a rule this variation is uniform and may be allowed for by adopting a proportionally higher or lower factor for the same developer.

(e) Within limits a slight error in judging the time of appearance will have no serious results."

The Artistic Value of Glossy Prints

F. Grenfell Baker makes a stand in the "British Journal of Photography" for the old-fashioned glossy print. Especially does he insist on its value in sunlit scenes, which, he implies, are spoiled by a malt surface. I know of no better medium for the rendering of sunlight than water color, but I have yet to meet the artist who would agree to put a glaze on a picture so produced. Nevertheless it is probable that the condemnation of glossy prints has been carried too far. It appears to me that there are small pictures, which when mounted in

optical contact with glass and suitably framed, are seen at an advantage not to be excelled by any other method of treatment. If any reader wishes to try this let me remind him that optical contact can be very readily secured by simply allowing the Solio print to remain in the wash water for twenty-four hours, bringing it into contact with the glass plate under water, and then remove and squeegee. It will dry firmly attached to the glass without any gelatine or other adhesive being necessary. Mr. Baker concludes his paper by saying:

"To sum up the whole question though not by any means to exhaust it, it may be said speaking generally that the use of a glossy paper is often more artistic than a matt one because the former, in the vast majority of cases, gives a better rendering of the meaning as well as the form and other pictorial items of a scene or subject. Glazed paper should always be employed whenever light is the chief characteristic of a picture or is an important factor of it; whenever life and the proximate effects of life are its salient features and whenever it is desired to bring into prominence or to distinguish detail which would otherwise be unrecognizeable.

Amongst the 'laws' governing composition none is more generally accepted than is that which insists that conspicuous incongruity is fatal to artistic success. And yet incongruity of a glaring type is often deliberately created simply by the substitution of matt in place of glossy paper. For example nothing could well be more incongruous than the effect produced by finishing with a dull, dead surface, a photograph of a scene which owes much or all of its charm to the glint and glow of sunlight over it. The present swing of fashion's pendulum in the direction of ordaining the invariable need of a sombre surface for photographic prints is supported in no single instance by an acknowlelged authority on art and is backed by no reasons which can by any possibility be regarded as valid. In place of argument we are given only adjectives; we are told that dullness and the absence of all distinctive detail are 'artistic' are 'beautiful' or are perchance 'precious'; that murkiness means 'mystery' 'breadth' and subtlety' and per contra we are informed that glossy printing is opposed to the 'best interests of art.'

On the other hand the popular taste in continuing to use glazed printing media whenever the latter are most appropriate that is in the vast majority of cases, is supported not only by the obvious teachings of nature but by the existing works of all those great painters who are acknowledged as masters by the cosmopolitan world of art."

Recognition of Disease Germs by Photography

The bacillus of typhoid fever is difficult to distinguish from a more or less harmless relative normally found in the human intestine. An English physician, Dr. Walter T. Stevenson has recently discovered that this may be effected by means of the photographic plate. It seems that if these germs are grown in broth for twenty-four hours and a few drops of this culture, as it is called, is placed upon a dry plate, allowed to dry in the dark and then developed, the typhoid bacillus will have scarcely caused any reduction of silver, whilst its relative the Bacillus Coli-communis will have produced a dense deposit. Dr. Stevenson sums up his observations as follows:

"(a) The discriminative action is the same with some variations in degrees of distinctness when typhoid and coli cultures of the same age are compared at very different periods after inoculation. Thus cultures of these two organisms in broth compared after four hours' growth and after thirty-three days, react as above.

(b) The activity of each increases with time up to a certain age which has not been accurately ascertained. This activity possibly varies with the physical conditions attending culture but may be taken as increasing from shortly after inoculation to four days' of growth.

(c) A coli culture of twenty-four hours age when compared with a typhoid culture of any age (tested up to thirty-three days) gives the more marked reducing effect.

(d) After a few hours growth the broths may be boiled anl thus sterilized and the differential effect upon sensitive surface persists.

(e) This discriminative reaction has been obtained with four cultures of coli from different sources and with five typhoid cultures from different sources.

(f) It will be found that if the sensitive plate is wetted with tap water and also with sterile broth and simultaneously applications of the cultures are made, four separate areas being thus prepared for comparison—the typhoid and sterile broth do not differ markedly in their actions upon the silver bromide whereas the effect of the tap water has been intermediate between that of the coli and the typhoid. It is known that water is to some extent a sensitizer.

(g) The time of exposure of the plate to the application of the cultures has varied between ten and ninety minutes and the discriminative action of twenty-four hours' cultures found to be best marked with an exposure of forty-five minutes. But from at least ten minutes exposure upwards the difference is obtained with any broth in which there is a visible growth.

(h) While in some of the earliest of these observations and before I had gained experience as to the best methods to employ, a few cases occurred in which the distinctive difference was not well marked, in all my recent observations, twenty-four in number, I have unfailingly obtained the differential effect.

(i) Finally I have observed that if pools of well-grown coli and typhoid broth cultures are poured on a photographic plate and exposed to light a reduction of silver is seen in a few minutes without development. After about thirty minutes the deposit due to the typhoid broth is distinctly darker than that due to the coli broth. If the pools be now poured off the sensitive plate the difference reaches its maximum but as the gelatine dries the distinction is almost lost. Tap water has no visible effect except the swelling of the wetted gelatine of the plate."

Blue Tones on Bromide

Here is a new formula from "Das Bild" said to give unusually fine results.

Solution A—Potassium ferricyanide 8 parts
Water .....1000 parts
Solution B—Ammonia Iron-alum 10 parts
Hydrochloric acid ...10 parts
Water .....1000 parts

Mix one part of A with two parts of B and make up to ten parts with water—Immerse the print until toning is complete.

Bromide of Silver Printing Out Papers

For some time past photographs have occurred in the Photographic journals describing a bromide paper to be printed on like Aristo. At the recent Congress of Applied Chemistry at Rome, Professor Valenta described the making of an emulsion for such a paper and from the account given in the "Photographische Correspondenz" it seems that the emulsion is made with silver nitrate and a bromide of either calcium, stontium or lithium, combining only about half of the silver with the bromide.

The emulsion is made with collodion and resulting paper is said to be of excellent quality; toning well and printing in half the time required by collodio-chloride paper.

An Acid Fixing Bath

I have repeatedly had occasion to state that I seek to report all improvements in photographic procedure without any responsibility for their real value. Nevertheless I always seek to test such novelties as may have personal or important general interest. I rarely use an acid bath, for I dislike the bother of making it and I slightly distrust its action, but the formula I published in the last issue for a bath consisting of nothing but plain hypo and boric acid tempted me to try it, and so far it has proved a perfect success. A word as to the technique of mixing it. Boric acid is very light and has a tendency to float on the surface of the water; therefore, rub it up into a paste with only a little water, then add the hypo and the rest of the water. It does not give off an odor, it is not strongly acid, and it remains clear until the hypo is exhausted.

A New Menstrum for Varnishes

The European journals have of late been exploiting the value of carbon tetrachloride in the production of cheap and good photographic varnishes. Thus, according to Valente, excellent varnishes for cold coating can be made by dissolving in either 5 per cent of nammar or 6 per cent of mastic. Tetrachloride of carbon is chemically closely related to chloroform, much cheaper and not inflammable.

True and False Orthochromatism

The question of orthochromatism is a difficult one under any circumstances. I have attempted to show in an earlier issue, but there is a phase of the subject which is so rarely considered and yet so very important that I cannot refrain from giving in full a statement thereof by Thomas Bolas in a recent issue of the English "Amateur Photographer."

"Mr. Chapman Jones' plea for a more real orthochromatism of 'orthochromatic' plates would be likely to bear fruit with a desirable degree of rapidity if we had a little more real science and a complete absence of misleading or obscuring laboratory jargon when orthochromatics is the subject of a Society 'paper' but manufacturers or vendors of plates seem to think that their wares will sell freely in proportion to the mystery and halo of mathematics with which they are developed. At any rate it is in connection with color sensitisers, color filters, orthochromatics and three-color work that we have, whether in papers read before societies or matter communicated to the journals, the more flagrant substitution of jargon and inaccuracy for true science and this perhaps arises largely from the remarkable fact which underlies three-color heliochromy, namely, that vision does not in all cases take account of color as color, combination sometimes producing the effect of a single or true spectrum color. Thus, to the normal eye, the spectrum yellow a little on the E side of D appears to be a bright clear, pure yellow, free from all suggestion of green on the one hand or red on the other. Here we have a single spectrum color and its effect on the sensorium. If now we combine the full, pure green light of the spectrum and the full, pure red light of the spectrum in suitable proportions, the effect on the eye is the same as that of the pure yellow light; in short the normal eye cannot distinguish between pure yellow anl a mixture of green light and red light. Hence it is possible to have two objects identically yellow to the sense of vision, one of these being truly yellow while the other is at the same time both red and green. As a matter of fact, most objects which we call yellow have a duplex property. (a) They reflect the yellow rays and in this sense are truly yellow. (b) They reflect green and red colors which united give the effect of yellow to the sense. Hence such objects are doubly yellow or extremely brilliant, the flowers of the yellow broom, for example. Let us suppose three yellow objects—A, really yellow or reflecting spectrum yellow only; B, really green and red but yellow to sense by reason of the yellow effect due to a combination of red light and green light; C, doubly yellow or reflecting the truly yellow rays anl also those green rays and red rays which, united, give the effect of yellow to the vision. To properly represent "C" which is an ordinary plant yellow or the bright yellow of the yellow broom blossoms we require a plate fully sensitive to red, yellow and green and a screen that allows all these colors to pass. Any defect in sensitiveness of the plate for red or green will be fatal to a true or brilliant reproduction of such object however sensitive the plate may be for spectral yellow. A yellow object (A) can be photographed on a plate if sensitive to the yellow but then a screen apparently yellow to the eye but chiefly allowing green and red to pass will be fatal. Again a yellow object (B) requires a plate sensitive to green and red but the use of a truly yellow screen would, in this case, prevent photographic action. For satisfactorily reproducing an ordinary flower yellow like that of the yellow broom in its full visual brilliancy, we require a combination of qualities not obtainable with any plates and screens on the market. This and other like simple issues are ably obscured by some who discourse unscientifically before the societies with the maleficent aid of curves, laboratory jargon and mathematics."

The Lumiere Three Color Plate

I described the principle of this remarkable process at the time of its publication. According to the Photographic Rundschaw it is soon to appear in commerce under the name of the "Autochrome" plate. In some respects it is the most promising thing that the seekers after material for color photography have produced.

The Amateur and His Troubles

By FAYETTE J. CLUTE

Stripping Films from Plates

A correspondent in the same state has had the misfortune to let fall a box of negatives with the result that several of them are broken, and writes to ask if there is any way of transfering the films to new supports. We have sent this gentleman a copy of a former issue containing an article on the subject by Charles Bailey but as it does not mention the treatment of broken negatives I will give an alternate plan. If the glass is broken but the film intact, cement another sheet of glass of the same size to the glass side of the negative with Canada balsam. To do this it is sufficient to place a few drops of the balsam here and there on the clean plate of glass and press the broken negative in contact. The balsam will spread to a wonderful degree. This is done so that when the film separates the broken pieces will not move about and cut the film and also that the solution used will not work up through the cracks and act irregularly upon the film. Where the film as well as the glass support is broken the same method is employed with the additional and precaution of seeing that the several pieces are in exactly the right position and as closely together as possible. When the balsam has set firmly the film is flowed with a solution of gelatine in a warm condition. The negatives are then soaked for about five minutes in a solution made by adding two ounces of a ten per cent. solution of caustic potash and an ounce of formaline to twenty ounces of water. The next thing is to immerse the negative for about the same period in a very dilute bath of hydrochloric acid, about one ounce of the acid in sixty ounces of water. After five minutes immersion the negatives will be found to strip quite readily, particularly if a cut is made through the film all around about a quarter on an inch from the edge. Owing to the roughness of the glass at the edge and also to the fact that some makers use an edging to prevent frilling, the film holds at the edges much more tenaciously than elsewhere. If my correspondent values these particular negatives I would advise that he familiarize himself with the process by making a few experiments on some waste negatives before going about the work of stripping the ones he mentions.

Ferrous Oxalate Developer

One of my correspondents has been reading that the old ferrous oxalate developer still remains unequalled as a developer for bromide prints, and ask me to give him directions for its compounding and use. The developer is made up of two solutions, the first as follows: To forty ounces of water add twelve ounces of neutral potassium oxalate and forty grains of oxalic acid. The other stock solution is made by adding four ounces of ferrous sulphate to ten ounces of water and then adding five minims of sulphuric acid. To use, add one ounce of the last solution to six of the first, always pouring the ferrous sulphate solution into the oxalate one. A few drops of a ten per cent solution of potassium bromide may be added if found necessary although many workers never use it. Its action is very pronounced and but a small amount is required. As a developer for bromide paper it gives a good rich black, but it is troublesome to use and requires prolonged washing in order to be sure that all the iron is removed as otherwise, staining will result in time. It is used only by a very few of the older school of photographers in this country, men who have never taken the time to acquaint themselves thoroughly with the possibilities of the more modern reducing agents. Personally, I have never been able to secure any better results with

this developer than with a good amidol formula; in fact, the results were not as good. I believe that this old developer would be much more popular if it had any real advantage, for the reason that our best workers are using no small amount of bromide paper and a little additional trouble would not deter them if better results were promised.

Amidol for Bromide Papers

And just as if I needed encouragement to go on, the very next letter laid aside for answer in this department asks if I can give a good working formula for amidol developer suitable for bromides. The writer of the letter goes on to ask if there is any other developer that promises better results. I would say that amidol is fast gaining the supremacy in England where our cousins are doing much of their best work in that medium and its popularity is due not only to the fine black deposit but to the simplicity of the developer when prepared ready for use. In order to understand just what is required it is well to explain that no alkali is used, that the sulphite of soda must be of the best and as the amidol does not keep well in solution it must be added just before use; that is, for the best results. Understanding this it is a simple matter to secure the fine results which amidol will give in bromide printing. Although a solution of sulphite of soda will keep fairly well it is best to avoid using such solution after having been prepared more than a month. The sulphite of soda is best kept in a twenty per cent. solution and if one wishes the bromide may be added to this stock solution in the proportion of two grains to the ounce. To mix a developer one has but to measure out one-fourth the amount of developer required from this bottle of stock sulphite of soda solution, add ten grains of amidol to each ounce of the solution and then make up to the amount of developer desired by adding water. The effect of bromide is very slightly beyond that of keeping the whites clear and for that reason there is no objection to the plan of adding it to the sulphite solution, particularly as it seems to assist in preserving that solution. If a restrainer is wanted it is advisible to use a few drops of a ten per cent solution of citric acid. Adding but one-third the amount of water or rather, adding an amount equal to the sulphite solution gives an excellent developer for gas light papers.

Color Combinations

A correspondent down in the southern part of the state sent me some prints last week that I must mention here for the reason that it is out of the question reproducing them in all their beauty. He uses a grade of good bristol card of a silver grey tint and sensitizes it with the ordinary blue-print solution, using that of the Mellen Manufacturing Company of Denver. The results are strikingly effective and I think the worker who tried this kind of paper for his blue-print solution would find himself using it much more than he does. My correspondent was led to see the beauty of the combination by trying to print some small vignetted heads on the note paper of a sister by the blue-print process. The paper happened to be of the silver grey tone that combines so pleasantly with the blue and this prompted him to look for the same tint and card with the result that he is printing some of his large favorite negatives in this medium. This reminds me that I once saw a bromide print of a man reading by candle light that had been treated in an analogous manner. The finished print, so we were told, was floated on a fairly strong solution of a yellow analine dye and just as the color started to show through on the face it was lifted off and placed on a blotter. When dry the effect of light was very fine, the yellow being stronger in some places than in others and in that way saving the effect from seeming too uniform and mechanical. A fire scene in red would suggest itself at once, to an experimenter in this direction. By holding the print up to the light and apply a little wax or varnish it would be easily possible to localize the color by allowing it to reach only the desired parts left unprotected by the coating applied to the back. The spreading action of the dye solution would insure soft vignetted edges to the coloring and for such scenes this would be quite pleasing.

Notes and Comment

Simple Convenience for Lantern Slide Makers

The fall and winter months are the ones in which the amateurs begin to think about their lantern slide work. Of all the many arrangements which have ever been offered for making lantern slides by contact, none of them present the many points of utility and convenience that are afforded by the F. & S. Lantern Slide Contact Printing Frame.

It is so constructed that the negative may be shifted to any part of it, brought into contact with the lantern slide plate, and held securely by the back panel and spring.

The center frame may be removed, the lantern slide plate placed in position, secured with center panel and spring, ready for exposure. These frames are made of straight grained cherry, substantially constructed and finished with lock jointed corners in sizes 4x5 and 5x7.

The 4x5 measures on the outside 8x8 inches and is one and three eight inches deep. The 5x7 measures 12x12 inches with a depth of one and one-half inches. The price of the 4x5 is $3.00 and the price of the 5x7 is $4.50.

This frame is made by Folmer & Schwing Company, Rochester, N. Y., and is undoubtedly on sale by all dealers.

Root's "Silento" Shutters

This is one of the well known line of Low shutters made by the Kalamazoo Shutter Company whose advertisement appears on another page. It is made entirely of metal with the one exception of the strong wooden bushing upon which the wings close. Working parts are all of tool steel or finely drawn hard brass. All wear, little as there can be with such careful construction, is provided for so that it can be taken up at once by means of set screws or pivots. There are no rubber parts, either hard or soft, to crack or leak, no springs or weak parts to get out of order or break, and the simplicity of the mechanism makes it easy to clean, the shutter case being less than a quarter of an inch in thickness. Small as is this dimension, the case of the larger sizes is only an inch and one-half larger each way than the full opening. In other words, the one with four inch opening is but five and one-half inches square. Its ease of working is due to the "Balance Principle" upon which all Low shutters are built. This makes the instrument respond to the first portion of the bulb pressure and responds instantly. In addition, it balances open for focusing, locking shut when closed, making it well worthy of the title bestowed upon the Low line: The "Quick and Easy" Shutters.

The Rapid Method of Carbon Printing

A. M. Marton, author of the popular treatise on "The Modern Methods of Carbon Printing," is the inventor of the new quick method of sensitizing carbon tissue, now coming into popular use with carbon printers everywhere. This new method has been successfully worked by Mr. Marton and a number of practical carbon printers ever since 1890, and was publishel in the second edition of his new treatise several years ago.

The sensitizer contains a volatile substance that, when brushed over the surface of the pigmented film, quickly evaporates, leaving the tissue dry and ready to use, in a remarkably short time. Tissue so treated possesses the same qualities as, and for some negatives, is superior to, that sensitized by immersion in a bichromate bath. The great value of this new improvement is highly appreciated by all carbon printers, and is regarded as a method that has brought the finest printing process known within the possibility of every studio, while the simplicity and cleanliness of the method delights anl fascinates the amateur worker.

The New Simplex Meter

The new form of the Simplex Exposure Meter is of hard black rubber with the figures in gold, making it a most handsome and durable pocket companion for the photographer. Each one is accompanied by a time card showing the multiple to be used for every brand of plates on the market al-

though no calculation is required for some twenty of the most popular plates and films. In the case of special and slow plates it is only one and one-half, two, three and only necessary to multiply the number of seconds indicated by one and one-half, two, three and the like as shown by the card. All in all, the meter is one that we can recommend as heartily as ever, and those of our readers who have noticed our remarks concerning it heretofore, will remember that we have not been sparing in our praise. For fifty cents, the more convenient form, the disk meter, will be sent postpaid by the Knowlton Company, Woonsocket, R. I. Although they make a card form that will be sent for twenty-five cents, we would advise the purchase of the first or disk pattern.

Milton Waide's School

The originator of the "One Man Method," the well known New York professional, if we may be excused for suggesting that he is not well known throughout the length and breadth of the country, has found his system of instruction so much in demand that he has been compelled to give up his photographic business. An organization has been formed under the name of the Metropolitan School of Photography with Mr. Waide as president and it will aim to give full and complete instruction in every branch of the art. A handsome prospectus is a part of their plan and we would advise all our readers to send for a copy. An elegantly equipped school will be maintained and while personal instruction will of course be the most advantagous, Mr. Waide's long and successful career as an instructor by mail is an assurance that the best possible system will be employed in the correspondence department. The advertisement of the school appears on another page and I trust all our readers will send for one of the prospectuses, if only to learn what is new in the way of photographic instruction. The booklet shows a number of interior views of the school as well as examples of the work of the pupils.

Still Doing Business

Gentlemen:—Our factory was struck by lightning on Sunday, August 5th., and a $7,000 fire followed, burning our skylight, which was the largest in Illinois outside of Chicago, and nearly everything on the second floor of our large building. We carried insurance to the amount of $4,000. In the telegraphic columns of the daily newspapers all over the country appeared an account of the fire, which stated that the plant was entirely destroyed. We have decided to write you stating the facts asking if you will kindly insert an item in your magazine about the fire, which will help correct the damage done by the misleading report which reached the newspapers. We sell our products through traveling agents, many of whom would naturally stop sending us their orders on reading the newspaper account of our plant's destruction.

We saved our many thousands of original stereoscopic negatives, also a portion of our manufacturing department, our office with its files and our big stock room, which contained about 250,000 Original Stereographs and a portion of our stock of stereoscopes, thus enabling us to fill our orders without interruption. This is of interest because as far as we can learn it is the first fire of any consequence to occur in any of the large stereograph factories, of which there are about eight in the United States.

Our business was established in 1899 and the present factory was opened in 1902. We make only Original Stereographs. Among the negatives which were saved in our vault at the time of the fire were a collection of San Francisco taken before, during and after the fire. We are sending you a sample of our work.

Thanking you for any notice which you may be able to give us, we are

Yours truly,
International Stereograph Co.,
G. E. Smith, Mgr.

A Good Booklet to Have

"Hammer's Little Book on Negative Making" is a particularly valuable manual and one that all who are desirous of making good negatives should have in their possession. In my travels I am asked questions every day that are answered thoroughly in this booklet. The beauty of it is, you do not have to use that particular brand of plates in order to apply the information. It is good sound advice suited to the particular plate you are using. If you are tempted to give the Hammer brand a trial, and if you feel that you can develop them

without holding them up to an unsafe ruby light the most of the time, try their Extra Fast Orthochromatic. You will be surprised at the results. One is likely to confuse the results secured with a fast orthochromatic plate with harsh negatives, distance that is lacking in atmosphere and out of key on account of its strong contrast. With the Hammer Extra Fast Orthochromatic the results are different. The negatives are characterized a softness, a richness of detail and an atmospheric quality that is most gratifying to the worker who desires to portray his subjects, be they either portraits, interiors or landscapes, with a near approach to their color values.

The August Sunset

The table of contents for the August *Sunset* shows a wide range of subjects. There are descriptive stories of the Oregon country, the orange region of California, and the "Door of Japan." Frank H. Spearman contributes a good story, a man's story; "The Strategy of McCloud." The second part of Charles Warren Stoddard's "Old Mission Idyls" appears in this number. It is the romatic history of Junipero Serra, the padre pioneer of California, told as only the author of "South Sea Idyls" could. Earl A. Walcott tells what he would do if he were the architect of San Francisco. "Calamity's Opportunity" will be read with finger on the map and argument by every one who has been in San Francisco since the fire. Besides these features there are poems, essays and criticisms.

Origin of the Indian Canoe

The first canoe was made by Hiawatha, who borrowed the bark of the birch for the shell, the boughs of the cedar for the frame, the roots of the tamarack for the thread and the balsam of the fir to close the seams. There was no need of paddles, for the thoughts of Hiawatha propelled the craft wherever he would have it go. His next exploit was to rid the land of Pearl Feather, the evil magician, who lived in a house of white fog, on the verge of the black pitch water. He it was who spread chills and fever among the people and brought low young and old. Armed with his bow and jasper-headed arrows, the hero-god steps into his canoe and starts across the dark water. Huge serpents rise in his way and try to drive him back, but he kills them with his arrows. The instant his canoe touches the farther shore, Hiawatha sends a challenging arrow into the white house of the evil demon, and Pearl Feather rushes out to the combat clad from head to foot in armor of wampum. They fight all day, and at evening Hiawatha, wounded and exhausted, finds he has only three arrows left, while his enemy is still unharmed. As the hero-god pauses for breath, he hears the voice of a woodpecker in a nearby tree, telling him to shoot his arrows into the top of Pearl Feather's head, where his scalp-lock begins, because that is the only place in which he is vunerable. Just then Pearl Feather stoops to pick up a rock to hurl at his foe and Hiawatha sends the first of his last three arrows into the top of his head. In recognition of his services Hiawatha dipped the head of his feathered friend in the blood that poured from Pearl Feather's wound.

—From Folk-Lore of a Vanishing Race, by P. T. Farnsworth, in *The Craftsman* for May.

National Competition for Goerz Cup Decided

For the Second Time John Garo of Boston Carries Off the Honor to Which Every Photographer in the Country Aspires

While the Salon awards in connection with the Photographers Association of America convention attracted considerable attention the Goerz trophy competition was not lost sight of by any means, for there is not a photographer in the country but who would feel highly honored were a picture of his selected by the jury having charge of the award in this contest each year.

The Goerz cup first became a factor in 1903 when the C. P. Goerz Optical Works offered a silver cup in annual competition at the annual conventions of the national body of photographers to be awarded the best single exhibit of portrait photography. The contest was thrown open to all professional photographers of the United States and Canada and as a result the por-

trait men began to sit up and take notice. The condition upon which the cup was offered were of a liberal nature and as a result there ensued a keen competition among the portrait men for the honor of being awarded the cup. The Goerz company announced that any photographer winning the cup twice in succession would be entitled to possession or any one winning it three times not in succession would be given the cup. Each successful competitor was given a hundred dollar bill by the company.

During the convention the cup has been exhibited at the booth of the C. P. Goerz Optical Works. It is a massive piece of silver by the Gorham Co. It cost $650 and while large in proportions its outlines are gracefully conceived. The names of the successful competitors have been engraved on the cup and the photographer into whose possession it falls will have something to show for the time and toil necessary in the preparation of a picture which would attract the attention of the jury selected each year to make the award. Were there more firms in the country like the Goerz Optical Works, not only would there be greater interest taken in the meetings of the national body but there would be the improvement in photography which would necessarily result from the experience secured in the preparation of pictures to be shown in competition.

The Goerz Optical Works who place the Goerz cup in competition are looked upon as the largest dealers in photographic lenses and binoculars in the world. Their American factory is in New York, with offices in that city, Chicago and San Francisco. Their main establishment, however, is in Berlin, with offices and factories in London, Paris, Berlin and St. Petersburg.—Niagara Falls *Gazette,* August 10th, '06.

Visits Denver

Photographing choice bits of scenery in Colorado has brought no end of fame to W. H. Jackson, the scenic photographer, whose name is written practically on every Colorado view extant. After an absence of eight years Mr. Jackson has returned for a brief vacation, from the superintendency of the largest souvenir postal concern in the world.

So remarkable has been the career of the artist that his name and fame are not confined to this country, but in Europe and the wilds of Asia he is known and honored.

A few years ago Mr. Jackson was known locally as the photographer whose camera had made famous little pieces of scenery among the Rockies. Souvenir houses used his views in books, postals and on playing cards. Harper Brothers heard of him and sent him abroad to bring home pictures of the hardly explored territory of Siberia, anl other parts of Asia, as well as the islands of the Indian and Pacific oceans. Royalty recognized his genius and princes were proud to accompany him on his tours through ice and snow.

That was the turning point in his career. No longer did he work in obscurity among the Rockies. Eight years ago a Detroit publishing house bought up the exclusive right to his Colorado views, bought his services for a handsome sum and took him to Detroit to superintend its plant. The publishing house does the largest business in souvenir postals in the world, the output being 20,000,000 annually. In addition to this it controls exclusively in this country the photocrome process of making pictures. In Zurich, Switzerland, another concern is using the same method of coloring views, but in America Mr. Jackson's company does it all. It is designed to take the place of the old and trying method of coloring by hand.

Mr. Jackson takes no more pictures. His time is taken up with the superintendency of the publishing house, and he is here now on a month's vacation.

"I did not come for business," said Mr. Jackson. "I just wanted to get another glimpse of the Rockies. I intend going camping and will take a few pictures, because I would not feel at home among the mountains without my camera."

Mr. and Mrs. Jackson are guests at the home of their daughter, Mrs. Myron Pattison, 3844 Goss street.

Mr. Jackson had the pleasure of meeting another photographer of note today at luncheon served at the Denver Athletic Club. E. J. Steichen of New York, famous for his work in portrait photography, was a guest. The luncheon was tendered by the newly organized photographic department of the club.—"Post," August 9th.

Our Book Shelf

Standard Reference and Text Books

Judging from our correspondence with the readers of CAMERA CRAFT, we are inclined to think that the following standard reference and text books on photography are by no means as widely known and appreciated as they deserve to be. Every amateur and professional worker should have one or more of these books on his book shelf to answer the thousand and one questions which come up in the course of the day's work. Many of the little difficulties encountered could be instantly solved by the reference to an authority on the subject, and the three authors whose books are here noticed are easily first in the world of photographic work. Any of the books mentioned on this page can be had by ordering through your dealer, or direct from the importers, Tennant and Ward, of New York.

"Science and Practice of Photography," by Chapman Jones; 4th edition revised and enlarged; 1904. Price, $2.50. Some years ago, Mr. Chapman Jones as a lecturer connected with the Science and Art Department of the South Kensington Museum, London, gave a course of instruction to the students of the Birkbeck Institute on the theory and practice of photography. Out of that course came a text book of which the work here under review is the fourth edition, practically rewritten and revised to date. With the exception of Abney's "Instructions in Photography" this volume is the most satisfactory among photographic text books. Part I deals with the chemistry and optics of photography in sixteen chapters, giving information about the chemical substances employed in photography, light and optics, the spectroscope, color sensitiveness, and the absorption of light, Part II deals with apparatus, the camera and its parts, exposure, shutters, hand cameras, and the choice and use of different shutters and lenses. Part III occupies the larger half of the book and deals with photographic processes and methods. This section has 39 pages upon dry plate and its manipulation, wet and dry collodion processes, orthochromatic processes, and the silver, iron platinum and pigment printing methods. The concluding chapters are devoted to photo-mechanical methods, lantern slides, photographic measurements, testing of plates, and a satisfactory and very full index gives immediate access to any desired topic in the 570 pages.

"Instruction in Photography," by Sir W. DeW. Abney; 11th edition, revised and rewritten throughout; 676 pages; illustrated; 1905; price $2.50.

For more years than we care to remember Capt. Abney, now Sir W. DeWAbney, has been recognized as the leading authority on photographic technics. Some of the most valuable photographic text books bear his name, and of them all his "Instruction in Photography" has always held the first place in popular favor. The appreciation given to this text book is evidenced by the fact that it is now in its eleventh edition. In the preparation of this edition the author has eliminated obsolete methods and processes and more space has been given to later methods and modern manipulation. This is the only work within our knowledge wherein is given a practical account of the manufacture of photographic emulsions for negatives and printing papers. It would be difficult to mention any department of photographic work which is not thoroughly and practically covered in this bulky volume. As a comprehensive text book on photography it has no equal, and those who feel the need of a single volume for general reference could not desire a better stand-by than "Instruction in Photography."

"The Dictionary of Photography," for professional and amateur photographers, by E. J. Wall; revised and brought to date (1902) by Thomas Bolas; 8th edition; 656 pages; price $3.75. The evolution of photography in theory and practice broadens so rapidly that a completely satisfactory, right-up-to-date photographic dictionary is one of the things we cannot hope for. Hence the ques-

tion, often asked: "Which is the best and most useful of the dictionaries at present obtainable?" There could be no hesitation in giving this distinction to Wall's well known "Dictionary of Photography," which has been before the world since 1890, with constant revision and addition. The eighth edition, here noticed, covers some 700 or 800 items, including a vast amount of condensed information, tables and formulae, covering the apparatus and methods of modern photography very fully. In some instances the information given under a single item practically amounts to a monograph on that subject, thus the treatment of exposure covers 20 pages, with a useful compendium of tables and mathematical data, affording a practical understanding of this difficult problem.

New Book of Photography

The Year-Book of Photography for 1906-7, published from the offices of the *Photographic News*, is one of those hardy annuals the publication of which has become a recognized event to be looked forward to by every one who practices photography—whether for pleasure or profit—in all parts of the world. The Year-Book is nearly as old as photography itself, the present being the 47th volume. Its past history is a notable one and covers the entire field of photographic work and research since 1859, when it was edited by Sir William Crookes.

The Editor, F. J. Mortimer, F. R. P. S., the well known marine photographer, who has done so much during the past six months to make the *Photographic News* the leading photographic weekly for amateurs, has also, by the introduction of a series of new and remarkable features, made the "Year-Book of Photography" a book that no amateur can now afford to be without.

The leading feature of the annual this year is an unique series of articles on "Modern Printing Processes." These articles are by well-known experts and prominent exhibitors, whose names are sufficient guarantee for the information given.

Sixteen full-page illustrations on art paper by well-known exhibitors are also given as illustrations to the text, and these will no doubt be highly appreciated.

Altogether the P. N. Year-Book is a wonderful shilling's worth, crammed full of useful matter, and can be regarded as an indispensable reference book for every photographer. Coming as it does right at the height of the photographic season, the book should be secured by every user of the camera. Our readers should therefore not fail to ask for the volume at their newsagents or photographic dealers, or apply direct to the Publishers, the *Photographic News* Office, 9 Cecil Court, Charing Cross Road, London, E. C. A money order for forty cents will cover cost and postage.

The September "American Boy"

The handsome football cover in colors that adorns the September number of The "American Boy" marks a further step in the very successful effort of the publishers of this magazine to produce what they claim to be "the best boys' paper in the world." The text and illustrations of this number are of the most interesting character. The continued stories by Tomlinson, Stratemeyer, and Alger are the chief features around which the boys' interest will center this month. Other headliners are "The Runaway Pup," an animal story; "The Undertow," the story of a boy's daring; "The Captain's Grit," a baseball story; "A Boy Hero and His Medal," a war story; "Our Pursuit of Old Golden," a hunting story; "The Two Admirals," a story of the ambition of two boys; "The Chase of the Rambler," a sea story; "Mike's Lucky Season," a story of the hunt. Other interesting titles are: "The Boy Aeronaut," "Boys as Poets," "My Young Sportsman," "The Shack in the Woods," "Hunting His First Job," "New Football Rules," "How to make a Wooden Necklace," Biographical Sketch of Daniel Webster, "Catching a Crocodile," and many short items too numerous to mention. The various regular departments of the paper are full of good things: "The Boy Mechanic and Electrician," "The Boy Photographer," "The Amateur Journalist" and "Tangles." The efforts of the publishers to organize boys into bands for literary and athletic pursuits, their efforts to get the paper into the hands of shut-in boys, anl their scheme for rewarding boy heroes and boy prize winners in school as set forth in this paper, will not be overlooked by its many readers. 72 illustrations. Subscription price, $1.00 a year. The Sprague Publishing Co., Detroit, Mich.

CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

PUBLISHED AT SAN FRANCISCO, CALIFORNIA

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CAMERA WANTS

Advertisements under this heading will be charged for at the rate of 50 cents each insertion for twenty-five words or less. Each additional word, two cents extra.

For Sale—Largest studio in Albany, Or.; complete up to 14x17, New York outfit; ground floor next to Postoffice in county seat of 5,000; own building myself; good lease; cleared $,5000.00 in eight years; price $800.00; wife's defective hearing reason for selling; will sell or want reliable all round man to take charge. Address C. S. Harnish, Albany, Or.

Wanted—A fountain air brush; state condition and price. H. B., care Camera Craft.

Situation Wanted—Bromide enlarger desires situation, is also a good retoucher. Address Wm. Thunen, Cherokee, Calif.

Wanted—A practical printer; must make carbons. D. B. Chase, 249 Main St., Salt Lake, Utah.

Wanted—A good all round man; must be capable of taking full charge of gallery during my occasional absence. Write fully in first letter. P. B. Barnes, Leon Gto. Mexico.

Post-Cards—Join the "Northwest Post-Card Union," Medford, Or. Twenty-five cents inserts your name and furnishes you with list of exchange. Next list August 1st.

Wanted—Amateurs having cameras (not Kodaks), 4x5 or any size larger, can earn $5.00 per week by taking pictures for us at home. Send stamp for particulars. Oval Portrait Co., Caxton Bldg., Chicago, Ill.

Wanted—Every amateur and professional photographer in the country to try our Carbon green developing paper. Send 25 cents for one dozen Carbon green and developer, or 50 cents for one dozen Carbon green and 8x10 Carbon green print, Showing a view of the ruins in San Francisco. Artura Photo Paper Co., 1639 Fillmore St., San Francisco.

Wanted—Men and women to qualify for profitable photographic positions. Send for our free book on photography. It describes the home study courses, which have made successful amateurs and money-making professionals of men and women, in all parts of the world. The cost of learning is paid by the plate, film and material waste we teach students to effect. Our students earn while they learn by selling the photographs made during the course of instruction. Write for the free book. American School of Art and Photography, 238 Washington Ave., Scranton, Pa.

Wanted—A position by a sober Japanese, a good all-round man, experienced also carbon printing; bromide enlarging a specialty. J. S. 1617 Gough St., San Francisco, Cal.

Wanted—Studio in Southern California, Los Angeles or Pasadena preferred. State class and amount of trade with prices received for work. Name cash price. Address B. H. M., care Camera Craft.

For Sale—The leading photo studio in Central Washington; first-class and all new equipment; a good business; the best growing town in the West; population, 10,000; good reason for selling. Inquire Box 702, No. Yakima, Wash.

For Sale—Superior lantern slides of the late disaster in San Francisco. Also color print slides made to order at $4.00 a dozen. J. Nasse, 1251 A Eddy St., San Francisco, Cal.

For Sale—One 5x7 Goerz Anschultz camera with No. 2 Dagor lens; one 5x7 Reflex with No. 3 Color lens or will sell separate without lenses. Both outfits are new and are guaranteed as first-class by their local agents. Address J. N., care Camera Craft.

CAMERA WANTS—Continued

For Sale—Studio 100 miles from San Francisco; town booming; many railroads coming; factories starting; population, 7,000; only one other studio; one of the best openings that can be found in California. For particulars address S. M. T., care Camera Craft.

For Sale or Exchange—4x5 Eastman Plate Camera, long focus, swing and reversible back, splendid lens; complete with tripod, roll holder, telephoto attachment, three plate holders and carrying case. Want 8x10 View camera. Jos. Amrhein, Frances, Wash

For Sale—8x10 Seroco View camera and outfit; used one season; write for particulars. Rose A. Drew, Viroqua, Wis.

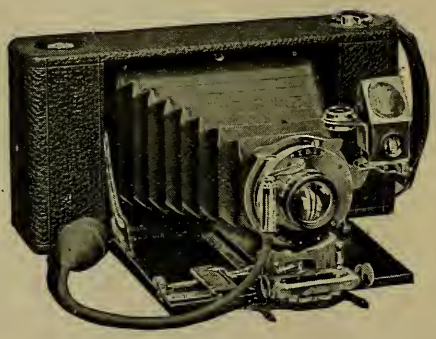
Wanted—10,000 photographers to try our new, quick method of carbon printing. It is the newest and greatest improvement ever made in the Carbon Process and will enable you to make fine artistic carbon pictures in almost any tone or color you desire, as easily and quickly as bromide or platinum. No apparatus or special arrangements of any kind are required. The work of sensitizing is a simple, clean operation, that takes but a few minutes to perform, and the tissue dries out ready to print in just a few minutes. The entire process is simplicity itself. A trial package of sensitizer, enough to make 500 pictures, with full directions, and many valuable pointers on the process (of which our new, quick method of turning the negative film, is alone worth $50.00 to any photographer,) will be sent postpaid on receipt of $1.00 (no stamps.) Do it now! prepare yourself for the holiday season. One trial will make you a "full fledged" carbon printer and you can make your own carbons on porcelain, celluloid, etc. Marton's Carbon Studio, Bloomington, Illinois.

WE SOLICIT

Developing and photo finishing from particular people—Prompt service at exceptionally reasonable prices.

NORTHWESTERN VIEW CO.
(PHOTO FINISHING DEPT.)
BOX 42 P EVANSTON, ILL.

"OPENS THE CORRECT WAY."



For Pictures, 3¼ x 5½.

No. 3 B Folding Hawk-Eye

Loads in daylight with Blair or Eastman N. C. Film Cartridges. A superb lens; an accurate shutter; every desirable adjustment.

Price, = = $20.00

BLAIR CAMERA COMPANY,
Rochester, N. Y.

Send for descriptive catalogue.

BUILT LIKE A POCKET KODAK.

The Pocket Kodak model is almost the universal choice for both the touring and stay at home photographer, and to fill the demand for a larger instrument of this type we have produced the No. 4A Folding Kodak making pictures 4¼ x 6½.

Just a trifle too large to warrant the word "pocket," it is nevertheless a marvel of compactness and ingenuity and in every respect is "built like a pocket Kodak."

DEVELOPMENT UNDER DIFFICULTIES.

A recent number of a prominent photographic journal includes an article with the above heading and dilates at length upon the improvisation of a dark-room by removing blankets from beds to tack over windows, the disadvantages of cellars, pantrys and coal holes, and the surprising number of cracks in the average house to let light in.

Information is also given as to what is the necessary outfit for development when touring, and the list is a most formidable one, and after all this the writer remarks, "of course these can only be regarded as make-shifts, and if a negative is developed that *gives promise* of a good picture it should be carefully rewashed and dried again on arrival home."

The amateur working the Kodak way can well afford to smile at the heading of the article, as the Kodak system of daylight loading and daylight development by means of the Kodak Tank Developer removes every possibility of mishap incident to the other methods, and protects the absolute novice from the temptation to experiment, forcing him to produce good results and to rely upon the tank because he soon learns that all the experience necessary is in the Tank.

A NON-CURLING START—AND FINISH.

When we first announced non-curling film every one was interested, and when use proved that it *was* non-curling, every one was enthusiastic.

Having so good a foundation for pictures, we naturally exerted every effort in perfecting and simplifying picture making the Kodak way; daylight development helped a lot, abolishing the dark-room, and making development as easy as loading the Kodak and pressing the button.

Finally we arrived at the last stage—mounting—here was room for improvement, sure enough.

Never did have trouble with the print curling—but paste it on a thin mount—that was different. We are always experimenting—trying to make things better, making radical changes when necessary—this will account for Kodak Dry Mounting Tissue—an entirely different way for mounting prints, and as much better as it is different from the old way.

We tried it in our own printing and developing department—things *have* to be just right there—and we are still using it *exclusively.*

After we had tested Kodak Dry Mounting Tissue in every possible way we introduced it to the public.

We have made picture making by the Kodak system not only daylight all the way but non-curling all the way. Prints will lie flat in absolute contact on any mount, no matter how thin—when mounted with the Kodak Dry Mounting Tissue. Just press with a hot iron, that's all there is to it.

PLEASE MENTION CAMERA CRAFT IN CORRESPONDING WITH ADVERTISERS

PERFECTLY GUILTY.

The story is told of a Dutch judge, who, in a trial for murder, rendered the following decision: "Dot book on der law says that ven there iss a doubt you must give him to the brisoner. Now here already there vas no doubt, for it broved vas that the killed man iss alive in jail over by Trexlertown. There iss no doubt. Therefore the law is blain. The brisoner is perfectly guilty. I bronounce him accordingly to be hung by the neck up."

Here is a parallel argument: "15% discount coupon on —— films. These films are so vastly improved on what they were last year and so much better than any other film made, that I am offering, for (30) thirty days, 10 per cent. discount on orders of 1 to 5 rolls, 15 per cent. discount on orders of 6 rolls or more."

The above is the advertisement put out by a dealer. It is hardly necessary to state that the films which are *offered at a cut price because they are so good*, are NOT Eastman films. In fact, Eastman films are not vastly improved over what they were last year. There was no room for vast improvement.

By the way: Only those manufacturers who maintain the quality of their products can maintain the price of their products.

PRESERVING REALITY.

When we come to print up our summer's negatives, it is not always easy to produce a tone that will fully present the reality of the scene as we remember it.

A black and white print some times seems too cold to properly render the summer glow of the afternoon sun on a field of ripened grain, and, again, a paper brown or sepia in tone cannot correctly convey the impression of the snowy canvas of a fleet of yachts racing for the mark.

Here is where the adaptability of Velox comes in, not only a grade and surface to fit every negative, but the original black and white print may be toned sepia in less than two minutes' time by means of Velox Redeveloper. The process of making Velox prints in any tone is so simple that even the beginner cannot help securing good results.

The Velox Book, a most complete manual for the guidance of the Velox printer, is just from the press.

Your dealer will be pleased to present you with a copy.

Take the full benefit of Pocket Photography

Make enlargements from your small Kodak negatives with the Kodak Enlarging Camera.

It's simple and inexpensive.

Ask your dealer.

PLEASE MENTION CAMERA CRAFT IN CORRESPONDING WITH ADVERTISERS

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CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

VOL. XIII. SAN FRANCISCO, CALIFORNIA, OCTOBER, 1906. No. 4

Copying Photographs and Pictures

By Chas. S. Taylor.

Illustrated by the Aurthor

Many amateur photographers often wish to copy an old time daguerreotype portrait of some friend or relative, or to preserve in a photographic form, a favorite drawing or plan. While there are no special difficulties to confront the experienced amateur, the less skillful user of the camera is very frequently at a loss just how to achieve the desired result. The craftsman who does a great deal of copying work is equipped with apparatus especially constructed for this branch of photography. The copying camera with its long bellows is a great convenience in making copies with dispatch, and a copying stand for holding both the camera and the picture, greatly facilitates the rapid and convenient handling of many copies. But as this apparatus is rarely found in the amateurs outfit, I shall merely pass it by with honorable mention and confine my remarks to the regulation amateur equipment.

It may not be out of place to add that my experience with the copying camera is of sufficient standing to warrant me in making the assertion that I have never found it impossible to get just as good a copy with a fairly long focus folding camera as by the use of the regular copying apparatus. This experience gained in the professional channel of trade, strengthened to my long standing opinion, that everything does not lie in the lens or camera one uses, but that everything does lie in the skill and ingenuity of the worker. Even the novice can hardly fail to produce fair results when the best apparatus is at hand and conditions of light are favorable. But it is quite another affair to adapt and to press into successful service such apparatus as we find ourselves in possession of, and it is only the careful, painstaking amateur who can so use his knowledge that it will balance the shortcomings of his equipment.

In the box form of fixed focus camera, we find the least suitable apparatus for copying work, because the worker is too greatly handicapped by the lack of such essential mechanical aids as are really necessary for producing anything approaching good work. This camera, with its fixed focus lens, has the position of the plate fixed at the point where the parallel rays of light from a distant object come together or focus. In attempting to photograph

a near object with the fixed focus camera the rays of light reach the lens in an extending condition, spread out as it were, and the focus of the near image is at a greater distance from the lens than the position of the plate. The rule for copying the same size is: the distance from the lens to the plate must be the approximate distance from the lens to the object being copied.

As neither the plate nor the lens can be readily changed to meet the altered conditions of focus demanded we must seek elsewhere for a means of shortening the focal length of the lens in order that in focussing a nearby object, the focal length of the lens is the same as the distance between the lens and the plate. This is the mission of the supplementary lenses which are so generally sold under the name of enlarging lenses or magnifiers. But while the focal length of the fixed focus lens is more or less satisfactorily shortened for copying requirements, the greatest drawback still exists. Without the help of the ground glass or focussing screen, the copyist must work more or less in the dark and rely almost solely upon the enlarging table and other by no means infallible aids for his result.

The folding hand camera is an instrument of greater scope and is better fitted to this purpose than the box instrument. But even this camera, in the less expensive models only, not infrequently has a limited extension and the bellows cannot be racked out the required distance, which has been previously pointed out, as twice the focal length of the lens for copying a picture the same dimensions. By fitting the supplementary enlarging lens to the hood of the lens or next to the diaphragm if a rapid rectilinear or double lens is used, we at once escape from the short focal difficulty. It may interest the reader to know that many of my copies are made with an eight-dollar folding camera, the bellows capacity of which is less than nine inches in the 5x7 size. Many of the reproductions illustrating this article were made with this inexpensive apparatus, the focal length being increased with an "Ideal" enlarging lens.

The quality of the lens has often enough been said to be the cause of success or failure, depending upon whether an expensive or cheap combination is employed. While I would not infer that the cheapest is as good as the best, my experience with many kinds inclines me to believe that a good cheap lens answers all practical copying purposes. It is generally believed by many workers that only a double or rectilinear lens can be used for copying, an opinion undoubtedly encouraged by many writers of photographic theory, as well as by the catalogues of our lens manufacturers, who usually say a single or landscape lens will produce a distortion of straight lines toward the edges of the plate, i. e., the lines will be curved. This assertion is true in theory and to some extent in practice, but it is only so when the focal length of the single lens is exceeded by the dimensions of the plate. In other words, this distortion of straight lines is seldom noticeable when the focal length of the single lens is sufficient to amply cover the plate. That the reader may judge for himself the very slight difference between several lenses, I have copied a number of photographs with as many different lenses, the reproductions of which are herewith given. The copy of the daguerreotype

shown herewith was made with a single lens of eight-inch focus upon a 4x5 plate and the distortion (?) is so slight that little or no difference can be seen in the copy when it is closely compared with the original picture. The single lens has, however, a narrower angle of view than the double or rapid rectilinear lens and the bellows of the camera must be extended more. Aside from the longer exposure made necessary by the lesser rapidity of the single lens, I have been unable to discover that great difference between the lenses which I surely expected to find when making the copies.

Again, we may discard the lens altogether and still make a good copy. In fact, the humble pinhole adapts itself very nicely to copying and where extreme definition is not cared for, the pinhole does the work most satisfactorily. Decorative drawings or pictures desired for this purpose are reproduced with a charming softness and delicacy of modelling unsurpassed by the work of any variety of lens. For all around work I would suggest an aperture made with a No. 10 needle, which is plenty small enough to secure all desirable detail in the copy. Pinhole exposures require more time than the simplest form of lenses, but in copying, a few extra minutes is seldom of much importance. Where a very soft effect is desired, a much larger pinhole, say that made with a No. 4 needle, may be used. The flower picture herewith is a reproduction of a pinhole photographic copy taken from another photograph; both original and copy were taken on a 4x5 plate.

For all ordinary work we can get along very well without a copying easel or stand and hang or pin our picture upon a drawing board which in turn hangs from a picture hook upon the wall. The board should hang plumb that the picture may be square with the focussing screen. The regulation drawing board may be used but in lieu of the orthodox artist's board, a good pine moulding board such as is used by the housewife makes a capital substitute quite as good in every way as the more expensive ones obtained at the shops dealing in artists' materials.

All paper surfaces are made up of a very great number of very small projections or tiny ridges, the size of which increase or decrease as the paper is of a rough or smooth surface. When copying a print that is illuminated from the top or one side it is evident that the sides of these tiny ridges farthest from the light are thrown into shadow. This patchy lighting exaggerates and brings into undue prominence these surface projections and the whole delicacy of the copy is destroyed. Where this roughness of texture or "grain" is very noticeable in the photograph or drawing to be copied, it must be, of course, present in the reproduction, but with a suitable light, proper exposure and correct development, no more grain than exists in the original should appear in the copy. No doubt the proper way to illuminate the picture is from directly in front and as flatly as possible, but I have found this next to impossible because the camera has a knack of getting in the way and cutting off the direct front light. As a flat front light is most difficult to obtain, a fairly strong light from any direction can be utilized providing one can control it to suit the requirements. The most simple way to secure an even diffusion of a side or top light is to enclose the space

between the picture and camera with tissue paper. For the convenience of the camerist it is a good plan to take a large sheet of white tissue paper and paste the edges together lengthwise, forming a kind of tunnel or cylinder. One end of this tube is pinned to the drawing board with the thumb tacks, leaving a margin of several inches around the picture being copied. The other end of the tunnel can be left loose, as the edges extend some inches back of the lens. The tissue paper acts both as a diffusing screen and as a reflector, lighting the whole picture surface evenly throughout, thus keeping the grain subdued. The picture should be carefully and as sharply focussed as possible before the tissue paper is pinned in place, using the largest stop to aid one in getting a sharp focus. If your camera is provided with a swing-back it is a camparatively easy matter to get the camera exactly square with the picture, and to render the marginal lines of the photograph perfectly straight with the plate. Simply tilt the swing-back until the lines of the photograph are parallel with the edges of the ground

Velox photograph copied same size with single lens of eight inches focus on 4x5 plate. Exposure of nine minutes on seed 26x plate. Made under tissue paper funnel with only north side light on a cloudy afternoon. Developed with dilute pyro for ten minutes. Negative is a fine printer.

Original print from which negative used opposite was copied. Made with a five inch anastigmat lens f-6.8 on a bright day, one thirty-fifth second exposure.

glass, then stop down the lens to secure sharp definition. The majority of my copies were made without the useful swing-back and the camera was frequently moved first this way then the other, in order to bring the camera and picture square with each other.

The length of exposure is not difficult to approximate if one but remembers that for any extension of the bellows beyond the scale marked for distant objects, the exposure is lengthened, when the lens is extended farther than the point for which we focus distant objects, it is evident that the normal values of the lens are no longer correct. Should the extension be twice the distance than that used for long distance objects. the *f* number changes in the same ratio or is doubled also. The real *f* value is found by multiplying the number engraved on the shutter or lens mount, by the focal extension of the camera, and dividing by the focal length of the lens. An example will clearly point this out to you. I have an eight-inch lens and when copying the plate is nine inches from the lens; the

focal extension is nine inches and I am using a stop marked *f* 64. Thus · 64x9 equals 576 divided by 8 equals *f* 72. In that way I find that the real *f* value of the lens is not *f* 64 as marked but *f* 72, and if I did not allow a very simple exposure for *f* 64, the error in reading the *f* value, would certainly encourage under-exposure for *f* 72. To further explain; we will take for an example the largest stop in some certain lens and find it two inches in diameter and find a smaller one which is one-half the diameter of the larger one, or one inch. As the smaller stop is one-half the diameter of the larger one, it would appear at first glance that the smaller stop would require twice the exposure of the larger one. Here is where a mistake is often made. The quantity of light admitted by a

Enlarged copy of print opposite, made with a Goerz lens, series 1B of nine and one-half inches equivalent focus. 4x5 plate in 6½x8½ camera. Exposure one minute at full opening, f-5 on Seed Gilt Edge plate. Tissue paper funnel used with north side and west front light. Developed with normal pyro, three grains to the ounce of solution.

Copy same size (reduced somewhat in this reproduction) of coarse newspaper halftone using Gorez Series 1B lens, stop f-64. Exposure of four minutes on Seed 26x plate. Taken under tissue paper funnel with side light from north window and front light from west. Plate a little over-exposed and developed in pyro, one grain to the ounce of solution.

stop or diaphragm is not in proportion to its diameter, but to the area of the diaphragm. The square of the diameter of any two circles is proportionate to their area and therefore the area of a two inch stop is four times greater than that of the smaller one. As the light admitted is in proportion to the area of the circle the larger stop admits four times as much light as the smaller stop which conversly admits but one-fourth as much light as the larger stop. For that reason it will require four times the exposure. There is much advantage gained by using one lens and stop for all copying work, as by frequent association one becomes intimately acquainted with his tools. It is also an excellent plan

Original on aristo-platino from which next picture was copied. Selected on account of its wealth of gradation which gives it the appearance of being a carbon print.

Copy made with single lens of ten inches focus stop f-64. Exposure twelve minutes on Seed 26x plate. Photograph pinned to drawing board three inches to side of window. North light from this one window at side, tissue paper funnel used. Developed in normal pyro, three grains to the ounce of solution.

to make a note of all exposures as well as the extension of the camera and from this data construct a table of exposures for your own particular method of working. I have made and have in use such a table and find it very convenient and accurate, and although a great help in my own work it would be of little use to another.

A full exposure should always be given as under-exposure produces a hard negative not desirable for photographic copy. The choice of a suitable developer for "copy negatives" is as varied as the developers themselves and the best developer will most probably be the one you are most familiar with. Hydroquinone has the merit of securing good density without stain. Glycin is good but slow, and so on to the end of the list. Personally I use pyro and find that the yellow stain peculiar to negatives developed with it assists in giving a very nice print. My first results in copying were closely akin to those secured by many beginners in that they were hopelessly flat with grayish shadows. This fault can be avoided by giving a full exposure and developing with a diluted or weak developer. The usual rule of the photographer, "expose for the shadows and let the high lights take care of themselves," should be, in this class of work, honored in the breach rather than in the observance; or in other words, devote your entire attention to the high lights as the shadows will take very good care of themselves. This mode of developing will greatly lessen the need of future intensification or reduction, as the negative will almost always have

rich shadows and bright, snappy highlights. My pyro formula is the one recommended by Carbutt in which the dry pyro is added to the alkaline solution directly before use. Development is commenced in a weak solution, one ounce pyro to ten ounces of alkaline solution, and where increased density is desired, the development is finished in a stronger solution, one ounce pyro to six ounces solution. This proportin of alkali is just about right for a camera plate, of medium speed. As a rule, slower plates require more alkali, while rapid speeds demand more pyro. But photographers are "men of many minds" and almost all developers will give the necessary "plucky negative" if the worker is familiar with the plate and knows the inns and outs of the chosen agent.

It is often a decided advantage in copying drawings and pictures which are framed under glass to remove them from their cases, thereby doing away with all troublesome reflections. Engravings and all drawings are best cleaned by brushing lightly with soft, stale bread, which, if carefully done will cause no injury, and will remove the dust and smoke which time has allowed to accumulate upon them. It is seldom desirable to do much focussing with the daguerreotype as the silver image is very delicate and a slight touch of the finger is often sufficient to mar its extremely sensitive surface. The glass case protecting the picture should be removed and the image very carefully dusted with a camels hair brush, but upon no account attempt to clean the image itself.

Sometimes the workers find that an otherwise excellent copy of negative has a faint deposit or slight fog along the outlines of the image. This haze can be readily removed from the lines without changing the density of the background by the use of Farmer's reducer, prepared as follows: Dissolve one ounce of red prussiate of potash—potassium ferricyanide, in four ounces of water and

Photograph copied through pin holes made with No. 10 needle. Exposure of fourteen minutes given with north side light and some front light from a west window. Seed 26x plate and developer diluted to give one-half grain pyro to ounce.

Daguerrotype copied same size Single lens of ten inch focus on 4x5 plate in 5x7 camera. Stop f-64, exposure 8½ minutes on Seed 26x plate. Taken under tissue paper funnel with side light from one north window only. Developed in dilute pyro developer, one grain pyro to ounce of solution.

then add sufficient water to make the bulk up to ten ounces. This should be bottled in a dark colored glass container and kept from the light as daylight decomposes a ferricyanide solution. A teaspoonful or two of this stock solution is put into a saucer or other convenient shallow dish and sufficient fresh hypo fixing bath—acid fixing bath will not answer—is added until the ferricyanide solution changes from the deep orange to a pale yellow or straw color. This reducer is applied to the plate with a tuft of cotton. Do not let the reducer remain upon the plate for any length of time, but use a very little at each application, frequently washing it off under the spigot until the desired reduction has been secured. The work of reduction should not be carried on in a strong light, but in a subdued one, such as would be used for toning. Intensification is also often desirable in order to add a certain amount of density to a thin negative. For this purpose the usual mercuric intensifier can be used. Two solutions are made, a bleaching and a blackening one, as follows: Bleaching Solution; mercuric chloride "bichloride of mercury," one half ounce; potassium bromide, one-half ounce; water, twenty ounces. Immerse in this solution until the image is bleached out white, then wash well in numerous changes of water and transfer to blackening solution composed of one ounce of sulphite of soda in ten ounces of water. The plate rapidly gains the necessary density and should be taken out as soon as thoroughly darkened, washed well and dried.

There are no difficulties attending the successful use of this intensifier if the user takes the necessary time to thoroughly wash away any trace of hypo which the film may contain before beginning operations.

IN THE LOWER ALPS By E. SHELDON PENNOYER

Interior Photography

By James Daniel Miller.

Illustrated by the Author

While the editor has not compromised himself by saying anything very complimentary about my pictures he has asked that I give his readers a few details as to my methods of working and in addition, he suggests that the pictures used be all from one residence in order that others may feel assured that the results are not those of pure chance as might be imagined were I to submit a variety of prints that I had selected as the most satisfactory evidence of my skill. The ones here reproduced, such as the editor selects, are all made in the same house, the residence of Mr. M. Gleason of this city. They will at least show what can be done with ordinary apparatus in securing a series of pictures of fairly good quality and giving a satisfactory idea of the interior of the house in which the pictures were made.

The work was done with an ordinary 5x7 camera fitted with a rapid rectilinear lens, medium isochromatic plates being used. It is well to use the camera on a fairly high tripod as it will be found that the characteristics of the rooms as they impress themselves upon the mind through the eye, are better preserved. The arrangement of the various articles and their position in relation to the floor is more familiar to one than is the aspect in which the floor is foreshortened by having the camera too low. Seeing that the camera is not placed in such a position that a blur is caused upon the focusing screen through too strong a light striking the surface of the lens, is also important. The front hood of my rectilinear is rather deep and were one using some of the modern anastigmats it would no doubt be often necessary to shade the lens from such light from the immediate side as I sometimes have to do with my own lens.

The arrangement of the room should be disturbed as little as possible in order that it may look natural to those most interested, its occupants. In fact, it is the part of wisdom to discourage even the desires of these occupants to arrange everything in apple-pie order. Such efforts on their part are almost sure to change the effect from that of a room used as the part of a residence to the prim effect secured in a display window. A crumpled cushion, an open book, a chair awry, anything of this sort, helps to give the feeling of life and an interior that does not give this sense of human occupancy will fail to give entire satisfaction. Most writers caution us against the introduction of large pieces of furniture in the immediate foreground, particularly if their base or that portion resting upon the floor is not shown as a support. With this I do not agree fully. Not only does the picture improve in stereoscopic effect when some article in the foreground is made to meet the lower edge of the picture space but often the moving of a table or some piece of furniture in the foreground a few inches, allows us to form a line that will take the eye from this larger object directly into the distance and in so doing, assist the composition materially.

The matter of exposure is one that costs the novice at this work no small amount of anxiety and disappointment. Judgment and experience gained by long practice are about the only factors that can be counted upon for assistance. I do not wish to belittle the great value of the many excellent exposure tables and meters on the market but in interior work they leave a great deal to the judgment of the photographer in making the calculations necessary to arrive at the proper exposure. The exposure depends upon the speed of the plate, quality and strength of the light and the stop used in the lens. My own practice has been to figure out the longest exposure by judgment suggested and then give half as much time in addition to the original estimate. The advice to judge exposure by the ground glass image does not apply with much force in interior work. The eye adjusts or accommodates itself to the weak light indoors and the image on the focusing screen seems much brighter than it would otherwise.

HALLWAY MR. M. GLEASON'S RESIDENCE DINING ROOM

This can be easily proven by going out into sunlight and walking for a few minutes and then returning to the inspection of the image on the ground glass before the eyes have had time to adapt themselves to the decreased light. It will be found that the image which before seemed so clear is barely distinguishable until the eyes have suited themselves to the new conditions. The worker should also gather knowledge from his own experience, be it ever so limited. If one will try and recall the cases in which either himself or anyone else to his knowledge has over-exposed an interior view he will find that such cases are quite rare. The ordinary interior unless well lighted with no shadows or ill lighted corners, is almost impossible of over exposure within a reasonable latitude. This latitude on the side of over exposure is very great for the reason that these shadows and dark portions will stand almost any amount of exposure while the better lighted portions will retain good quality unless forced in development and this is not necessary when full time is given.

INTERIORS—MR. M. GLEASON'S RESIDENCE

AN ORIENTAL CORNER
THE DRAWING ROOM
CORNER, DRAWING ROOM

CORNER GIRL'S ROOM
A BACHELOR'S ROOM
A GIRL'S ROOM

Development is best done tentatively. I start each plate in a well diluted developer containing a few extra drops of bromide solution. This will serve as a guide to show whether the exposure has been over, under or correct. After one or two trials one will know by the time it takes for the image to make its appearance, which way the exposure has varied. If under exposure is indicated, continue development in the weak or dilute developer, renewing the developer if necessary and finishing with a full strength developer in another tray should printing density not be secured with the weaker solution. If over-exposure is discovered after a short immersion in the first tray, transfer the plate at once to the strong developer and should this not seem to be enough to insure the necessary printing density and brilliancy, mix up a developer containing but one-half the regular amount of alkali and a generous dose of the bromide solution. On the other hand it will be found a rare occurrence to have to resort to more than the plan of starting all plates in the weak developer for full detail, ending with the strong solution in order to secure density.

These orthochromatic plates are quite sensitive to yellow and artificial light and for that reason it is well to protect them from the light of the ruby lamp as much as possible. One is prone to hold such negatives up to the light more frequently and for longer periods of time than plates that have been exposed on landscape subjects, and this is where the damage is done, particularly when the development is prolonged as it will be with the weak developer. The light should be a dull ruby one and the plates exposed to its rays as little as possible. By putting the plate in the weak developer and covering the tray or interposing a card between it and the light an occasional glance will allow one to judge of the progress being made, and this in turn indicates the procedure. That being determined there is really no other reason than impatience to observe the result for exposing the negative to the light except near the end of the process when there is much less danger of causing fog.

One further bit of advice and I am done. Be sure that your picture is rightly placed on the focussing screen. In landscape work one can often trim out a portion and thus secure a small picture that is more effective than the whole. In interiors this is not so easily done unless such smaller part is near the center of the negative for the reason that the point of sight is in the center of the original picture space embraced by the lens. Trimming the print unevenly will throw this point of sight away from the center and as done the proper perspective is destroyed. The dining room interior which is shown herewith is an example in point. Nearly two inches was trimmed from the right hand side of the original print and the trying perspective of the table as well as the doubtful angle of the windows are objectionable. With these few hints, a little practice and ordinary care, the average amateur should be able to turn out very creditable work and work that will often prove very gratifying to his friends who may desire to test his skill as a photographer.

Photography at the Nest

By Harry L. Shepherd

Illustrated by the Author

What is of more interest to a lover of birds than a complete series of photographs illustrating, step by step, the life of the young, say from the time the nest contains its full complement of eggs, till the fledglings are ready to leave the nest? Such a series of photographs will explain, a great deal better than mere words, the history of many a bird family. Your notes will be much shorter, for your prints will tell most of the story. If you are endowed with patience, not afraid of very hard work, and willing to persevere,

YOUNG KINGBIRD FOURTEEN DAYS OLD

then the camera will prove your greatest friend, and you will have the double satisfaction of being able to show, besides your notes, your illustrations, the fruits of your labors. Again, I shall warn you that if you associate the camera with your studies you will surely experience the work, the disappointments—and they are very many—and the great need of an abundance of patience, but the satisfaction you will experience as you sit in your, perhaps, stuffy little dark room, and nervously watch the image of that nest, or those young birds, grow, will amply repay you for a hard day's work. Quite often you will return home without exposing a plate, but that is, or should be, an incentive to try again.

In picturing young birds your temper will at times be very sorely tried, especially if you endeavor to pose them, say on a branch or the edge of the nest. Do not try to make a young bird balance itself on a branch when it is not

strong enough to properly do so, for it is liable to fall off and perhaps be killed. Be absolutely humane in all your dealings with birds, and remember that they love, if I may use the word, their homes as we do ours. While the eggs are in the nest, it is best, in photographing it, not to disturb it in any way except, perhaps, to tie back a branch or two—do not cut them off, not even leaves which may obstruct the view, afterwards replace things as you found them and scatter a few crumbs or seeds about in the vicinity of the nest. Some birds, before the eggs are hatched, and some even afterwards, will desert their nests on very little provocation, while others will have to be frightened or even lifted from the nest in order to photograph the eggs. So use your judgment if you do not understand a particular bird's habits and remember their attachment to their little homes.

YOUNG CROWS EIGHT DAYS OLD

The chief essential to a bird photographer's outfit is a "long focus" or long draw camera, having a reversible back and as good a lens as can be afforded. A silent shutter is a very fine help, but such shutters for speed work are hard to find. As to the size of the camera, what we call the 4x5 and 5x7 will prove the most convenient, preferably the 4x5 if you have much tramping to do, as weight counts a good deal in such work.

The lens used in making the illustrations accompanying this article was an ordinary R.R. (rapid rectilinear) working at *f* 10.5, the focal length of the combination being eight and one-fourth inches, of the back lens thirteen and of the front lens nineteen inches.

In picturing nests and young birds I generally use the full combination on account of "speed" requirements and depth of focus, while in photographing old birds I generally use the front or back lens alone, for this gives me a

larger image and so I can work at a greater distance from my subject, but in this case the shutter must be set for a longer exposure, as using the front or back lens alone decreases the effective size of the diaphragm, or stop, according to the focal length of the lens used. An automatic shutter, if it works well, is a great convenience. Test your shutter with one of the numerous cheap, but good, shutter speed-testers, to see that your maximum speed is at least equal to one-fortieth second and also obtain the true speeds of the different speeds marked on the shutter, as the marked speeds are rarely accurate. The tripod used should be strong and steady. A very handy device for tilting the camera is made as follows: Two hard wood blocks four inches square and one-half inch thick are hinged together so as to open and close like a book. In the centre of one is fastened a brass or iron nut which

YOUNG KINGBIRDS FOURTEEN DAYS OLD

engages the screw in the tripod head. In the upper block is placed a short shanked tripod screw, which engages the thread in the base of the camera. By this means the camera can be tilted and held in place by screwing a flat piece of brass, in which several small holes have been punched, to the side of the upper block, the holes engaging a small stout nail or wire driven into the side of the lower block. To clamp the camera to a small branch or the rung of a ladder, a ball and socket clamp will be required. Amongst the sundries that will be found useful are fifty feet of one-fourth inch rope, used in pulling the camera up trees; twenty-five to fifty feet of rubber tubing and a bicycle pump to work the shutter from a distance; a light ladder with the two top rungs round in order that the ball and socket clamp may be attached; a mirror in a stout frame to reflect light into dark corners—one 10x12 inches

is none too large; a small pocket mirror used in setting the diaphragm when working behind the camera, a small ball of stout cord and a field glass.

As to what plate to use, all the fast brands are good and for quick exposures under poor light conditions it is best to "back" them. Use the developer you are best acquainted with. For myself I prefer dilute pyro. Isochromatic plates and a light ray screen are useful in photographing blue or brown spotted eggs. If part of a nest containing eggs is in direct sunlight it is best to screen the nest with a piece of cheesecloth stretched on a wire or light wooden frame. This same piece of cheesecloth is very handy for stretching under a branch on which you wish to place young birds, for some of them are almost sure to topple off.

And now, my amateur friend, we will start out together and seek some material for a series of photographs. For today the camera and outfit will be left behind. As we tramp through a field and are about to climb over a wall, a bunch of grey scurries away through the grass from just at our feet. With trembling fingers I part the grass and after a little hunting expose the nest containing four eggs. Mark the location and make any notes you desire. This subject is a very easy one, as the tripod and tilting top will serve here.

KINGBIRDS—THREE DAYS OLD

Well, during our day's tramp we locate several nests containing eggs, some in bushes near the ground, others ten to twenty feet above. The ones in the bushes will be easily photographed by cutting two sticks the same length as the ladder in the outfit and binding them to the sides of the ladder near the top and so turn it into an improvised stepladder. By means of the ball and socket-lamp the camera may easily be fastened to one of the top rungs.

One of the nests well above the ground may be photographed by lengthening the tripod legs, by binding sticks to them and doing the necessary focusing, etc., while mounted on the ladder. One nest in a tree can be easily "taken" by clamping the camera to a convenient limb, or if a limb is not handy, by fastening a round stick between two branches and on this stick mounting the camera by means of the ball and socket clamp. The above are, of course, only suggestions, as almost all cases require different treatment to obtain a successful photograph.

One of the most important parts of the work is first to study your ground

thoroughly and map out just what you have to do. Then when you return with your camera you do not waste time at the nest. Be quick, yet careful. In photographing young birds in or about the nest plenty of time may be taken after they are some days old. It is useless to photograph most young birds until they are five to eight days of age. When the young birds are able to stand on a branch one may set the tripod on the ground near a convenient perch and place the little fluffy balls on it, of course being sure to stretch the cheesecloth net underneath in case they fall off. In photographing old birds it is necessary to conceal the camera as much as possible. For this purpose I use a green cloth, and if the camera is set up on the ground I throw a few branches and leaves over it and then retire to my place of concealment and

NEST OF WILSON THRUSH

"trip" the shutter by means of the long tube and bicycle pump. If it is necessary to leave the camera, with a slide drawn, in bright sunlight, wrap the focusing cloth around it and the bellows so that stray light may not fog the plate.

Many, many days you will spend if you attempt to photograph full grown birds, as their perching spot will oftentimes be empty the day you are prepared. A dummy camera and tripod, a black box and three sticks is a good "ruse" at times. Allow it to remain in position for several days. This will accustom the birds to the "one-eyed box."

Under the Skylight

By A. L. Jackson, Tacoma.

An Address Delivered before the Sixth Annual Convention of the Photographers' Association of the Pacific Northwest

Mr. President, Ladies and Gentlemen:—

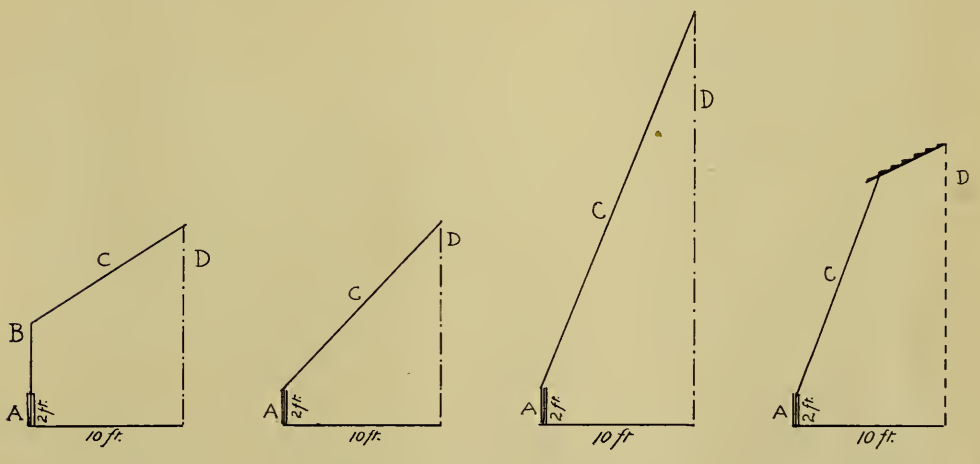
I cannot make the hackneyed excuse that I was unaware that I was to talk on this subject, since I read my name coupled with my subject some three weeks or more ago in the early announcement of this Convention; neither can I claim that I have not given the subject study, for the reason that I have studied little else for the last thirty years. I will say, however, that I feel poorly fitted to say anything on the subject of "Under the Skylight" that will be of any interest to the larger part of the photographers here present, and I have no doubt that my talk will be a very dry one to many. If I can, however, say anything that will benefit one or more I will feel repaid for my effort. I am not certain that all here care much about the skylight as a means of lighting their subjects to be photographed, as no doubt some work entirely by electric light and need no skylight, and judging by the "Aristo Eagle," we may all soon abandon the skylight and place ourselves under the electric light, the "Lime light," or some other form of artificial illuminant.

I suppose I might handle this subject in several different ways. The way that seems to me as offering the most possible benefit to any inexperienced photographer is to attempt to show the effect of the light upon a subject as it falls from different angles as regards height from the floor, and also as influenced by the direction of the light front or back of the sitter; the effect of a high or low light on the sitter, the use of curtains, the distance of the sitter from the side light, the location of the camera, and the like. In my early photographic career I never saw or heard of any kind of a skylight except one giving a direct outside light, one with both side and top light or double slant, as it is called. I mean, by direct outside light, a light that is secured by cutting into the side wall and roof of a building, and not one coming from a light shaft as we now often see. When I went into my present quarters, some sixteen year ago, it was purely an experiment on my part as to whether I could do good work from a light-shaft; especially one that was quite high and not very large. I built a form of skylight below, curtained it the same as though it was an outside light, and with the exception of its being slow by reason of my having to curtain a great deal in order to direct my light, I get along fairly well.

We now have photographers working with ordinary windows and in fact with all kinds of lights, and they do this with fair success when they understand how to handle their light. I am a strong advocate, however, of the double light, top and side, whether it be a single or a double slant. In this connection I desire to say that I do not believe there is any lighting made with a single slant light that cannot be duplicated with a double slant. I think the double slant is by far the preferable light for large groups, since it gives a light that covers

more width of floor space than the single slant. I also think a single slant an easier light to direct to a given point than a double slant, except that one must use more curtains with a double slant to get the same effect. It is really surprising, after all, how differently different photographers handle their light, and yet each produce beautifully lighted pictures. Some prefer to use no curtains at all and aim to make the light fall on their sitter as they wish it to by locating the sitter in certain parts of the room with their camera so located that it will face the sitter from the desired direction to make the most of the light thus produced, claiming by this means to be able to get any desired lighting without resorting to curtains and thus cutting down the length of exposure. We also have the advocates of the full curtained skylight, as of old, and also the good old head rest. Personally, I am very partial to curtains, and if you please, headrests on occasion, although I make very many sittings without using the latter.

I have here a diagram showing both the single and double slant lights.



I will attempt to show you my reasons for claiming that a double slant light will better illuminate a large group, and why I have a preference for the single slant for a single figure. Commencing at the same height from the floor on the side wall erect two lights, one a double slant and the other a single slant light. It is evident that by setting in a sash B, say six feet from the base line A, on the side wall perpendicular, and from the top of this side sash B, you commence a top sash C, running back into the room at an angle of less than forty-five degrees to a point that a perpendicular line from its upper end will drop, say ten or twelve feet from the side wall into the room, you have a double slant light that will illuminate twenty-five or thirty feet width of floor space, giving a strong light the full width, and by proper curtaining you can get as strong a light at the most remote point from the side light as can be secured near to it. Again, slant from the same point A, on the side wall and erect a single sash back into the room to the point where the perpendicular line would fall ten or

twelve feet from the side wall A, starting at the same height from the floor, and you have practically the same light as in the former case, but you can at once see by the diagram that you cannot work the light at all for the reason that it would be in your way. Your back ground frames or carrier would not pass under it without striking, except at the most remote distance from the side wall A. The result is evident. You must erect your sash at a greater angle, or more nearly perpendicular, not to interfere with your room space. In this case, if you continue your sash C, to the same perpendicular line D, you would have the same light again but an extremely high light at the top and therefore not practical. The only remedy in order to have a single slant light is not to attempt to cover the same floor space with light from the top that you can easily get from a double slant light. It is also clear by reference to these diagrams, that you can get any light with the double slant that can be secured with a single.

I trust I have made myself sufficiently clear to the extent that you can understand my position with reference to single and double slant lights. I have seen, and so have you, the most beautifully lighted photographs made under both kinds.

I wish to say a word regarding the handling of sitters in the operating room and then I will close. Many good things have been said regarding the importance of efficient reception room help, and the proper treatment of a prospective sitter. Miss Dorris has very beautifully told us of this very important department of our work, and I agree with her perfectly. But I desire to impress upon you the fact that the handling of your sitter in the operating room is also highly important, even more important so far as results are concerned, than in the reception room. No matter what favorable impression the reception lady has made upon the sitter, if the operator does not confirm all the good work done by her it is worse than wasted time. I realize and know that the operator is not entirely responsible in all cases where there is not perfect harmony between the sitter and himself, for there are some people that cannot be handled in any way except mechanically. I use that word for lack of a better one. I will try to make my meaning clear. I believe in a kind of inspiration caused by mutual sympathy between the sitter and operator, and with this mutual sympathy there is nothing that the operator will not do to secure the best possible results. He never tires trying to attain these results. He has the best opportunity to get just what he wants, for the reason that his sitter is in perfect sympathy with his efforts and therefore lends himself to his every effort. The operator makes a good impression on his sitters and they go out pleased, more than willing to accept what he has made when the proof is shown. Get into a dispute with your sitter, work under a strain of discord all through the sitting, and then observe the results from every point of view. The operator could not do his best, the sitter could not look her best; she was rebellious at the time, will remain so and fail to appreciate anything in the way of a portrait even if it is good. There is an indescribable something, like a stone wall, that oftentimes erects itself between individuals and it is responsible for many a failure in the operating room. Remove this obstacle if you can, the very first thing you do, and everything conspires to the end that your work is the best, your

MADONNA
GUM PRINT
By ANNIE W. BRIGMAN

customer is made your friend, and all goes well. I might go on and illustrate this by citing many cases, but I know you all understand my meaning if you are operators; if not, you could not profit by my giving further illustrations. Receive your sitter with a pleasant smile and a happy remark. Impress upon them if possible a thorough understanding of their very nature by sympathizing with them in their efforts to get something good, since, as they say, they have never had a good photograph in all their life. Be ready with an answer, however, if they expect something you cannot promise. I never allow my sitter to run me, nor do I lose my dignity, but I try to impress them with the fact that I understand just how to handle them to get the best possible results, and if I can get them to show that they have faith in me, I generally do get results. I know, and you know, my brother operators, just the moment that your sitter submits himself to you and trusts your judgment in all the details of the sitting. Again, I never pose my sitters by walking on their corns and looking them in the face as if I were going to hypnotize them; never plant my two hands, one on either side of their face and head to straighten it properly or use the same tactics with their shoulders. Neither do I get in front of them and put my head down in line with the camera in order to see what view I have of them. I very much prefer making my pose from the ground glass. There you can see every line as it will photograph; you can also see the light as it falls over the sitter's face and drapery. I request the sitters to turn their heads to the left or right, raise or lower the head, and the like, avoiding anything more forceful. There can be no more satisfactory way of getting just the pose you want, and the beauty of it is the sitter does the work himself and is more apt to be natural in the resultant pose.

In summing up I will say that operating is a pleasure if you make friends of your sitters, but oh! such a trial of you do not. So let us study to enter more thoroughly into the lives of our customers, and try to look at our work from their view point, and I am convinced that in nine cases out of ten they in turn will abandon their preconceived ideas and fall in line with ours, and we will have a love feast rather than a constant scrap.

The Good of the Association

By J. Savannah.

An Address before the Sixth Annual Convention of the Pacific Northwest

Are Conventions conducive to the advancement of photography? There have been many arguments offered, both pro and con, in reference to this question. Speaking for myself I can but see one answer and that is positive assertion that they are and can be made most potent factors in the advancement of photography. Our profession is yet an infant. Within the last few years the mere mechanical work of producing a photograph has been made so simple that a child of ten with a camera and the necessary equipment can in a few days

achieve success. Of course this does not apply to children only. Such being the case, as I see it, anyone who can make a photograph is really a photographer; the only difference being that we sometimes prefix the word amateur. "A rose by any other name will smell as sweet," but I certainly believe we have been misnamed. I know of no other profession in which this case obtains. There are certainly no amateur doctors. To be sure, there are amateur astronomers, but the study of astronomy is generally followed by those who take it up purely for the love of the science. In other professions, before one can obtain a degree, a certain length of time must be given to study in some university or college devoted to that particular purpose. Photography until very recently possessed no opportunities for study of this kind and such as we now have I do not consider as holding the same official position as in other lines of endeavor.

Photographers have been and are being made in several ways. A few drift into it from the printing room or some other department which they entered as youngsters for the sake of employment. Others, with some slight knowledge or experience already gained, embrace professional photography through force of circumstances. Occassionally one will abandon a lucrative vocation and enter the ranks of the photographers purely for the love of the art that photography can show. The consequence is that we have all ranks and conditions of workers in our ranks. None of us possess diplomas as past-masters of the skylight. One person adopts photography and succeeds through a natural artistic feeling that enhances the merits of his work. Another will succeed while producing only mechanical photographs but exercising superior business ability.

I claim that conventions, if conducted properly and on a high plane, can be made our recognized fountain-head of knowledge, our college as it were. The man in possession of superior business knowledge and ability can exchange a little of his store with the man who possesses a surfiture of art inclination and training. Both will profit and gain by the exchange and neither will suffer loss. And the benefit will not end with them. While both are elevated to a higher plane, the profession acquires a greater dignity by their advancement. The public must be taught that our profession is not one of graft as many seem to think it is today. This brings us to the question: had we not better fraternize? We can not all be Turners or Angelos with the camera. One worker will always make better pictures than another, but by working together we not only improve the status of ourselves and our profession but we will get far more pleasure out of life and possibly more business.

Taking up the subject of sittings and resittings. In this matter through the carelessness of photographers themselves we are being imposed upon. In the ordinary course of a sitting it often happens that even after having made half a dozen negatives of a sitter, all perfectly satisfactory to oneself, upon submitting proofs the customer explains that he or she is well pleased with the work but would like to have you try again as you have not caught "just the right expression." Personally, I think they should be chargedf or that privilege. Take for example the doctor. He calls upon a patient, ten minutes is con-

sumed and the bill is five dollars or whatever his charge may be. Again he may spend an hour diagnosing a case and his bill will be the same, and by the time the patient has recovered his bill will be about what he thinks his services have been worth. In our case we must gracefully submit to the whims of our customers; there is no chance for subterfuge and we must take the customer's medicine. In the other case the doctor administers it.

Many will not agree with me that privileging the customer to "sit until they are satisfied" is not business to commence with and protection from imposition can not be secured by any system. For example, we often find people desirous of sitting for a picture but when asked as to the quality desired, they reply: "Oh, I don't really know. I shall have to see the proofs first." This is most indefinite, to say the least. Suppose every customer took the same stand? One sitter certainly has as much right as another.

Why should photography, undoubtedly requiring the greatest combination of modern scientific and artistic knowledge, be amongst the poorest paid profession? To be sure, some photographers are well paid, but generally the prices secured for photographs are low, in fact, lower than they should be by any right or reason. The great difficulty at times is in persuading customers who are paying a fair price for work, that they are not being robbed. The average person has no knowledge, except of the most limited kind, concerning either pictures, music, or in fact, any of the arts. A gentleman once made this pertinent remark: "Mr. Savannah, do you know you are asking me ten dollars for what apparently the man around the corner is asking three? It is beyond my comprehension but the rest of the family come here so I suppose I've got to go against it." I felt that I was taking his money under false pretenses.

Then there are our getting business methods. Those in vogue are numerous. Some have merit, some are ruinous and others have a strong flavor of the fake order. I often feel for the credulous and indulgent public. I simply touch upon this subject as one that gives plenty of opportunity for intelligent discussion. Does general advertising pay? That is to say, advertising in programs, bills of fare, hotel registers and the like. Mr. Rockwood's experience is well worth considering in this connection. He purchased the exclusive right to advertise in every theatrical program in New York City for one year for the tidy sum of thirty thousand dollars. During that time he never had so much as an inquiry that he could trace directly to such advertising. I have often said and still maintain that the only proper way to advertise photography is with pictures. Another matter which should be brought forward is the necessity of securing payment for photographs which are used for magazines and other publications. Such should be paid for in full as the consideration called "credit" is scarcely remunerative and is not a fair return for the benefits which the publications receive. Any photographer whose brains create a picture should unquestionably have the right to attach his name to that picture and he should sign it as does an artist his paintings. I except photographic magazines, however, as I look upon them as a sort of "family affair."

For reorders of photographs the charge should be the full price. If a negative is worth reordering from it is worth today what it was yesterday; besides,

the customer can always sit again should he or she desire to do so. Any negative kept over a certain length of time should be charged for extra. We must insure, store, and generally care for them. These means of securing duplicates or reorders are largely our stock in trade; the results of expended mental effort and energy.

I have endeavored to suggest subjects more or less seriously affecting the welfare of those present, and as I said before, briefly. As to how much the bread-and-butter side of our work is affected I trust we shall be able to determine. I would suggest that we select any of these subjects that we may decide upon, thoroughly discuss them and then go on record as an association as endorsing more businesslike methods. In conclusion let me say, and I believe that in doing so I am voicing the sentiments of this association, we extend our hearty thanks to the manufacturers and dealers for their support. Every firm that has so kindly assisted, either personally or through representatives, with their cash and with their helpful efforts in our behalf, should, whenever possible, be given the preference by us when purchasing goods to supply our wants. You all know that without their aid, conventions would cease to be possible. I thank you.

PEACHES AND WINE By WM. S. RICE

Christmas, New Year and Easter Cards

By F. W. Kelsey

Illustrated by the Author

I was not a little interested in Captain Lyon's article in the last issue, particularly as he explained that most of his photographic work took the form of post cards for the gratification of his friends to whom they were sent as he voyaged about. I have sent out a good many of these cards, and as they have been praised more or less by the recipients I am emboldened to explain how I go about the work.

The purely photographic ones with which this brief article is illustrated will no doubt explain themselves, particularly after I have told how the more complicated one was accomplished. This one, bearing Easter greetings, was produced in the following manner: I first selected some appropriate engravings and half-tones from the pages of magazines, catalogues and the like. I next secure several sheets of smooth cardboard of proportionate dimensions with the ordinary postal cards. If the upper left-hand corner of a postal card is placed squarely in the same corner of a large sheet of cardboard and held in place while a line is drawn with a pencil and ruler from this same corner through the lower right-hand corner and continued on through the larger card, one will have a guide for the exact proportions. A rectangle cut from this large card by trimming the lower and right-hand side, will be exactly proportionate to the post card as long as the lower right-hand corner formed by so trimming is bisected by this pencil line that was drawn through the two corners of the small card as advised.

By roughly arranging such borders and designs as you intend using, you can determine approximately one dimension of the large card being used as a mount. Trim that side and from a point where such trim crosses the pencil mark, make another trim for the remaining side. One has then but to decorate the large card as fancy may dictate or taste suggest. In the example shown, the strip of border at the left is from an ordinary newspaper, and the paper being quite yellow it does not come out as well as some of the other which was printed on better paper in a magazine. The circular picture and its dark background are a part of a catalogue cover, the ground to the left being a warm sepia photographed much darker than it looked in the copy as I pasted it together. With a brush and Chinese white the high lights on the flower petals and on the small chicks were lightened up a little. The lettering was done with an ordinary pen, the original of this pasted-up card being about 5x8 inches. One or two of the rabbits were drawn in with a pen, as there were not enough of them to fill the space. A black border was drawn all around the cardboard copy in order to give the card a finish and also to make it easier to find the place on the negative with more ease in printing.

The next thing to do after first making this copy as good as possible, is to make a negative of it of exactly the right size to fit the cards you will use in printing. In making this negative, aim to expose and develop for a clear,

sharply defined image. A soft, even light is the best, and full exposure should be given. Development should be started with a solution a little weak in the alkali, so that flatness will not result from the generous exposure. Working in this way, one is assured full detail, and at the same time there is no danger of producing a slow printing negative through veiling the negative with prolonged development or with a solution strong in alkali.

The advantage of this method of working is the convenience and the distinctive individuality of the cards which result. The holiday season will

soon be upon us again, and I am putting forth this method, a method that can be enlarged upon to any extent, in the hope that it will lead others to try their skill along similar lines, as I am sure that their results will afford them an amount of gratification that will amply reward them for their trouble. The others shown are produced in much the same way, with the exception of using a grey card instead of a white one. I regret that my cards on hand at the moment do not include some more effective combinations of photographs and pen or brush work, but I am desirous of getting this to the editor in time for

the following issue. However, I have here two examples, and will explain my method of working, and the plan can be enlarged upon in many different ways that will suggest themselves as one goes about the work. In making the accompanying Christmas card, I mounted a print of San Luis Rey Mission on a piece of white cardboard about seven by ten inches, with a good smooth surface, and followed it with a small circular print of San Diego's old mission bells. Now, to lend the idea of Christmas, and to revive the memories of the good old customs of the "Yule Tide," the sprays of holly and mistletoe were added with a pen, and, last of all, the lettering was put on. The picture then presented the appearance of an over-grown postal card made up of photographs and pen work. Having completed the details of the large picture, we made a negative from it, reducing it to the desired size, and printed upon postal cards or other paper, we had a Christmas greeting differing from anything we could find on the market, and at the same time being characteristic of both time and place. By this means one is able to send to distant friends, perhaps, a pleasing combination depicting his own home, and a "Happy New Year" greeting, or, a beautiful bunch of flowers from his garden, accompanied by an "Easter Greeting."

I often make use of this process in sending invitations to informal social gatherings. For example, wishing to invite a few friends to a "Farmer Hearty" party, our invitations were made up for the occasion, something like the one herewith, score cards being made to match. Since first getting out these cards a few years ago, I find myself selecting suitable borders and letterings from papers and magazines, clipping them out and placing in a box ready for use at some future time.

The Chemistry of Development

By E. A. Turner

In the present article of this series, we will consider the actual chemical operations that take place in the making of a negative on dry plate or film. As usually expressed in chemical symbols, the operations or reactions would be as Greek to anyone but a student of chemistry, but by modifying the symbols we hope to make the processes more readily understood.

On the surface of the unexposed dry plate or film we have a compound of silver and bromide in finely divided particles surrounded by gelatine, which serves as a vehicle. When a developing solution acts upon this compound, it tends to split the silver and bromine apart and leave the silver deposited in the gelatine. This silver forms the darkened portions of a negative. But, as every photographer knows, the developer will not blacken the surface of a plate that has not been exposed to light, provided the developer is right, not too warm, and the plate is not left in for too long a time. In other words, the silver bromide is capable of resisting the action of the developer until its power of resisting is overcome by an exposure of the film to light. As soon, however, as the silver bromide is "exposed," its power of resisting is so changed and diminished that the developer quickly turns the exposed plate to a degree of gray or black, depending upon the amount of light that has acted upon it.

For the sake of simplicity we may consider the unexposed silver bromide to be silver and bromine joined by two links or bonds. After exposure we may imagine one of the links to be removed, thus: S=B, stable silver bromide (unexposed); S—B, unstable silver bromide (exposed,). The "stable" compound with the two links resists the action of the developer, but the unstable or exposed form, with one link, cannot resist and is reduced to form the photographic image. Of course this does not represent any real state of affairs, it is simply an illustration used to make the actual operation easier to understand.

When the stable form is reduced by the developer or when an unexposed plate or film grays over in the developer, we have what is called chemical fog. Chemical fog occurs: 1. When the dry plate or film is not properly manufactured and the silver bromide is not in proper condition. 2. When the plate or film is too old. The length of time it will keep in perfect condition depends upon temperature and moisture conditions. Any good plate will keep a year or longer without appreciable change, in a cool dry place. Films are not credited with having such good keeping qualities but can usually be depended upon for six months. 3. When the developer is too strong in alkali, too warm, or is allowed to act for too long a time. The third cause is the one that concerns us most, as it is the one most under the control of the photographer. The difficulty with a developer too strong in alkali can be easily avoided by carefully preparing the developer from a reliable formula. Use anhydrous carbonate of soda and be sure the formula is one based on the soda being in this form, as it is of double the strength of

the crystals. Too warm a developer is also readily avoided by the use of a thermometer and a little ice, though usually the ice is unnecessary if a supply of cool water is at hand and the dark room is not considerably warmer than personal comfort permits. A temperature of seventy degrees Fahrenheit is not too high, though sixty-five degrees is the best general working temperature.

With developer and temperature correct, it only remains to avoid too long a time of development. When an under-exposure is forced to bring up all possible detail, it frequently happens that the time of development is extended until chemical fog sets in. Then the little detail that has been secured is so buried in fog that its printing quality is lost. In the writer's experience, the best results are secured from an under-exposure by developing only a little longer than for a normal exposure.

The readiness with which this chemical fog sets in depends to a great extent upon the nature of the sensitive coating. When using a good plate, I find that in a developer of average strength all the detail is out and of full strength in five minutes' development. The plate may then be left in the same developer for five minutes more before the slightest trace of chemical fog appears. There is only noticeable a slight increase in density, as the image builds up steadily at first, but only very slowly after the first five minutes.

When chemical fog is entirely absent, as it should be, that part of the negatives covered by the rebates of the holders will be perfectly clear and transparent unless "light fog" be present. The effect of light fog is exactly the same as that of chemical fog; a graying over of the entire surface of the plate, including the unexposed rebates. Light fog, as its name implies, is caused simply by a partial exposure of the entire surface of the plate to light. It may be caused by the use of an unsafe light in loading the holders or in developing, or by a leak in the camera bellows. When fog occurs, and it is not known whether it is light fog or chemical fog, take a slip of a new, unexposed plate, flow it with a correctly compounded developer for a proper developing time, keeping it always in absolute darkness or in a very dim ruby light that is surely safe. Then wash and fix. If this slip is fogged, chemical fog is present; if the slip is clear, chemical fog is absent and the trouble must be light fog.

There is another effect which might be called fog, sometimes noticed in over-exposed negatives. An over-exposed plate can receive so much exposure, even in the shadow portions, that it will gray over in developing, there being no clear glass or even nearly an approach to clear glass on the entire surface of the negative, except where protected by the rebates. This is not fog, however, and the resultant "dense" negatives which are fairly dark even in the lightest portions, are often excellent printers.

The appearances of different kinds of fog being disposed of, we will pass on to the consideration of the negative which is correctly made and free from fog, doing so in the next issue where we will also take up the question of developers more fully.

CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

FAYETTE J. CLUTE, Editor and Proprietor

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Illness of Mr. Lasky

B. E. Lasky of the popular Van Ness Avenue photographic stock house known as "Lasky's," has been confined to his home with inflammation of the sciatic nerve. Mr. Lasky's genial manners have endeared him to a large portion of our local camera users who will all be pleased to learn that his condition is so much improved that he is again at his place of business although the use of a cane is indulged in at times.

Miss Hubley in Sacramento

A letter from Miss Grace Hubley advises that she has opened a studio in the Stoll Building at Sacramento. The residents of that city are to be congratulated on the acquisition of so capable and conscientious an exponent of artistic photography and its possibilities in portraiture. Miss Hubley has certainly been wise in her selection of a city so appreciative of good work, and we need only add our expressions of gratification to those of her many friends who are pleased to learn of her resumed activity in her chosen field. Her success is assured in any locality where good work is valued, and in our sister city of the Sacramento Valley there is no fear of merit not receiving its full measure of reward.

Pictures Back from the Second Salon

At the close of the second American salon we asked the committee in charge to hold the pictures by our Western workers until such time as we might have a permanent office and the freight congestion be relieved. This resulted in their reaching us only within the last few days. Last year we had good and sufficient reason for entering a protest at the way in which the returned pictures reached our hands. This year all is changed and we must congratulate those having the matter in charge for the remarkable care which must have been used in packing the pictures after each exhibition. The frames returned to our local workers show hardly a trace of wear, and from their condition almost suggest that they were framed anew before being returned. Our shipment this year is very small, for a reason that all will appreciate, but the most excellent condition in which these other pictures were returned would have inspired a very heavy sending under ordinary conditions.

Miss Hanscom In Seattle

The large circle of friends which Adelaide Hanscom claims in this city will join us in wishing her all success in her new location at Seattle, Washington. Her new studio is situated in the People's Saving Bank Building and being centrally located there can be only the most gratifying success awaiting her as the residents of the coming Exposition City are not lacking in appreciation of that which has originality and art quality so strongly marked as is the case with her work. While we regret the loss of so able a worker we can congratulate Seattle and console ourselves that we can still claim Miss Hanscom and her work as belonging to the Pacific Coast.

Mr. Stieglitz's Camera Work

The last issue, number sixteen, of that sumptuous quarterly which so nearly approaches an exhibition of original work by the leaders, has recently come to hand. This particular number contains seven large, full page photogravure reproductions of work by Robert Demachy and three credited to C. Puyo. The leading article is from the pen of Mr. Demachy, and is entitled: "My Experience of the Rawlins Oil Process." The issue sustains the high reputation which "Camera Work" has always held and all workers interested in the higher and more artistic phases of photography should be on the list of subscribers. It is edited and published by Alfred Stieglitz, 1111 Madison avenue, New York.

A Genial Representative

A. H. Bresler, representing the Carbona Company of Minneapolis, Minnesota, has been in the city for a few days, during which time he has made many friends, and of course called at our office. He reports business as more than meeting his highest expectations, large orders being secured from prominent dealers in all the large cities visited. His line of samples was most interesting, showing as they did the beautiful browns and reds secured with their Carbona Self Toning paper, and the Carbona Water Tone brands giving blacks and browns. At the moment of writing this the local agent has not been appointed, but it will no doubt be one of our advertisers whose announcement will convey the information.

Lens Study by Annie W. Brigman

Paul Elder & Co. announce an exhibition of "Lens Studies" by Annie W. Brigman, at their art rooms, corner of Bush street and Van Ness avenue, November 12th. The exhibition will be composed of seventeen pictures, mostly, if not all, being new, part of the results of her summer's work. While her reputation as one of our best workers is by no means local, and to say that the exhibition will receive marked attention from large numbers of the appreciative ones, is to prophesy most safely. We hope to be able to favor our readers with reproductions of several of the pictures in early issues.

A Photographic Digest

By H. D'ARCY POWER, M. D.

All communications for this Department should be addressed to H. D'Arcy Power, M. D., Burlingame, San Mateo Co., California

Bromozone

In the last issue I gave a short account of Mr. Manly's new discovery whereby a bromide print can be turned into a carbon picture or be used as a means of obtaining a large number of carbon copies. Since then much new information has come to hand, all of which tends to confirm my prediction that we have in this process one of the most important discoveries of modern photography. It will be recollected that the modus operandi was to immerse a piece of carbon tissue in a given fluid, squeeze it into contact with a bromide print, and then develop in the usual way, a carbon image appearing in place of the original bromide. The fluid used is, according to the specification of the patent, as follows:

Potassium Ferricyanide....	4	1 drachm
Potassium Bromide.....	4	1 drachm
Potassium Bichromate.....	4	1 drachm
Alum	2	30 grains
Citric Acid.....	3-5	10 grains
Water 600		20 ounces

When the carbon tissue saturated with this fluid comes in contact with the bromide print, the first two ingredients act on the silver, converting it into silver ferrocyanide, whereby it is bleached (just as in the bleaching of bromides for rapid sulphur toning). This silver ferrocyanide in turn reduces the potassium bichromate forming a chromium salt, and the latter, in turn, insolubilises the gelatine of the carbon tissue, which, with its contained pigment, is thrown down, molecule for molecule, on the silver image which is buried beneath the deposit. The alum and citric acid are used to prevent a too great extension of the process with possible blurring. We thus have a pale yellow image of ferrocyanide of silver covered by a coat of gelatine and pigment. Several courses are now open to the worker. If the color of the silver image is harmonious with or lost beneath that of the pigment, it may be left as it is. If it conflict it is easily removed by Farmer's reducer. But if the carbon image be weak the subjacent silver image can be utilized to reinforce the former. Immerse the print in a bromide developer and the silver image will reappear in its original black, plus the added deposit of pigmented gelatine, or if brown silver is better suited to the carbon pigment it is easily obtained by redeveloping with sodium sulphide. An English writer, the Rev. Henry Dick, has cleverly utilized this mixed method to obtain partial intensifications. Speaking of a picture that he exhibits he says: "The picture 'Springtime Hath Its Shadows' is an outdoor portrait, the deep shadows of which I have never succeeded in getting deep enough by the bromide process alone. I have therefore added to the shadows of the bromide print just the amount of the density desired. If you have followed the process as here explained you will have gathered that the printing is chemical printing, not light printing. This printing is done when the bromide and plaster are squeegeed together. Now all printing begins in the shadows, hence if it is desired to add depth to the shadows only when we print, i. e., leave the two in contact just long enough for this purpose, say five minutes instead of twenty. In this case the bromide print will be found upon developing to be bleached out and it will be seen that patches of gelatine and pigment stand up in relief upon the shadows only. Now if after washing, the silver image is re-developed, the high lights and half-tones will come up as before, but the shadows are much deeper."

Washing Negatives, with the Minimum of Trouble

C. J. Davis, writing in the "Amateur Photographer," says: "There is a good deal of doubt amongst amateurs as to what amount of washing is required to thoroughly free a negative from hypo. Water is not always at hand in unlimited quantities and there are many dark rooms where an ever-flowing supply is not provided for. Some, under these circumstances, place their trust in so-called 'eliminators,' expecting these chemical aids to permanence to perform the task.

"A collection of negatives extending over eighteen years is a very fair source from which to draw conclusions as to the efficiency or otherwise of the methods adopted in their production. Since the year 1888 I have had many dark-rooms, but never a running tap. All water has been invariably carried in bucket or jug, and under such conditions there is every inducement to practice economy. My method of washing has been the same for both negatives and prints, and in recent years films have received the same treatment. There is nothing new in the method and it has often been described and advocated, and at one time washing tanks were procurable under the name of gravity washers, which rendered this method of washing particularly simple.

"The chief difference of these gravity washers from the usual tank was the extra space allowed between the lower edge of the negative and the bottom of the tank. This space was arrived at by adding somewhat larger legs than usual to the rack and constructing the tank about two inches deeper to accommodate them. The reason why the hypo from the negative finds its way into this auxiliary two inches is capable, I believe, of explanation by means of the laws of gravity, or, possibly, by the law dealing with the diffusion of liquids, but whatever the explanation may be, the material fact remains that, by allowing five ounces of water for each quarter-plate negative when a dozen or more are to be washed, the elimination of the hypo is so complete that even after eighteen years no change due to faulty washing is apparent.

"My own procedure is to slightly rinse after fixing and then transfer to the gravity washer, where the negatives remain over night. In the morning the washer is carefully tilted until the syphon commences to discharge, and when the tank is empty the negatives are taken out and swabbed once or twice with a piece of wet wash-leather. It requires some nerve to adopt this method, especially when unlimited water has hitherto been used. Do not check the syphon when once it has been set running, or the recoil will drive the hypo-contaminated water into the upper portions of the tank. For the same reason the negatives must not be lifted out of the water as it is liable to lead to disturbance in the heavier sedimentary solution.

"Films and prints may be washed in a similar manner, but it is necessary to have at least four inches of water below them if the floating method is used. The reason for this is that when the prints are floating the water cannot be syphoned off, and lifting them out one by one is liable to set up currents.

"When employing a gravity washer the main point to guard against is disturbance of the water after the negatives have been inserted. Considerable variation of temperature may lead to cross currents being set up, hence the desirability of washing at night. Any ordinary washer may be converted into a gravity washer provided it is deep enough, the rack if unprovided with long legs being wedged (not suspended) two inches from the bottom."

Transforming Printing Paper Into Gaslight Paper.

If the soluble silver salts in an ordinary citrate printing-out paper are converted into silver bromide, or into a mixture of silver haloids, with a predominance of bromide, a development paper of the gaslight class is obtained, and a convenient solution for effecting the change is that recommended by M. Tranchant. In 1,000 c. c. of water dissolve three grammes of potassium bromide, one gramme of potassium iodide, and one-tenth of a gramme of copper sulphate. The paper should remain for five to six minutes in this solution, and then it requires washing for six minutes, after which it should be hung up to dry. In actual practice, and if the special solu-

tion is not ready to hand, it will be sufficient to use the ordinary "ten per cent" solution of potassium bromide diluted with twice its volume of water. The real usefulness of the above-mentioned transformation process steps in when the amateur has only printing-out paper in stock and he wishes to make a few prints of an evening. At first sight the drying of the washed paper may seem to be a long operation, but if the precaution is taken to put a few sheets of blotting paper in the kitchen oven before commencing, the washed sheets may be sufficiently dried, in a few minutes, by pressure in the hot blotting paper. Absolute dryness is not essential, as there is no soluble silver salt to diffuse out and stain the negative.—British Journal of Photography.

Effect of Organic Matter on Intensification.

The "British Journal of Photography," in a recent article, states that experiments made with the chromium intensification process demonstrate that when the silver image contains organic matter (as in pyro-developed negatives) the intensification is greatly diminished, and suggests that the same is likely to be true of the other intensification processes.

I have experimented with this method of intensification and had no difficulty in getting a good result. I used the formula described and ordinary carbon tissue. The use of the latter is not advised by the inventor who supplies a special tissue for this process. The ordinary tissue is seemingly too poor in pigment for use in a process in which the deposit of gelatine is limited to that which can be thrown down by a given amount of silver (the precipitation being chemical, not due to light as in ordinary carbon printing), and my experiment with autotype brown-black tissue gave me images of good definition and correct gradation, but decidedly weak. I have seen, however, pictures made with the Manly special tissue and the strength was that of an ordinary carbon. I have referred in these remarks to the method of developing the carbon image on the bromide print, but it must be remembered that after the silver image has done its work on the chromated gelatine and formed an image thereon the latter can be stripped from the bromide print and separately developed. Mr. Manly, in an interview with the editor of "Photography," says:

"I see you put more stress, in your article, upon developing the ozobrome on the original bromide print as the foundation, but I do not think this will be the popular method. For my own part I always now strip the ozobrome and develop it on a piece of transfer paper. It leaves my bromide print unharmed and capable of further use. And they can be employed over and over again. I have often gotten a dozen or twenty ozobromes from one bromide print. It is the simplest thing in the world to put the bromide back into a clean working developer, amidol, metol-hydrokinone, etc., until the image is fully brought back and then to proceed again. I have made a dozen ozobromes from one bromide print, and the twelfth has been in every way as good as the first, although—it is a very curious fact—the eighth and ninth, perhaps, were imperfect. The limit to the number is the stability of the card or gelatine of the image." My own experience confirms this opinion of Mr. Manley's.

Definition in Stereoscopic Pictures

The seeming reality of stereoscopic pictures is largely the result of the blending of unlike images. It is therefore not wonderful that this dissimilarity should also extend to definition as well as form, and, according to M. Vincent in the "Photo Revue," this is so, and to obtain the best results the separate elements of a stereogram should be focused for different planes.

Invisible Writing on a Black Ground

"There are several commercial picture postcards which bear the pictures of old masters surrounded by a black frame. Recently a case was met with in which a criminal had used this black frame on which to write a message to his accomplice. As a matter of fact, if this black frame is written on with black ink, the writing completely disappears when dry and passes through the post without comment. To decipher the message I gave the card a coating of water color varnish, and the writing immediately became visible and could be easily photographed."

Club Notes

Birmingham Annual Exhibition

The Birmingham Photographic Society, affiliated with the Royal Photographic Society, announces its Twenty-second Annual Exhibition at the galleries of the Royal Society of Artists, New street, Birmingham, February 23 to March 2, 1907.

There will be three open classes: Pictures, any subject or size, lantern slides, and scientific photographs. The awards will be silver and bronze medals in each class. The decision of the judges will be final, and they have power to withhold awards in any class if the merit of the work is insufficient. No entry fees will be exacted.

The regulations read:

1. The Selection Committee reserve full power to accept or reject any picture. All the entries will, however, pass before the judges.

2. Every entry must be correctly described on the Entry Form, which is to be returned to the Hon. Sec. not later than February 1, 1907, addressed to Mr. Lewis Lloyd, Norwich Union Chambers, Congreve Street, Birmingham, England.

3. Pictures must be received not later than February 1st, 1907, in order to allow time for selection, and framing of those accepted. They must be sent to the same address. Carriage both ways must be paid by the exhibitor.

4. Exhibits from abroad must be mounted, but need not be framed. Full particulars for identification must be written on the back of the mount.

5. Lantern slides must be standard English size, 3¼x3¼. They will be judged by limelight. In packing, the name of the exhibitor and the number of slides the box contains must appear on the outside of the box. Title and the exhibitor's name must also be on each slide.

6. Exhibits must be the unaided work of the exhibitor (except mounting and framing). Any breach of this rule involves liability of rejection.

7. Ten per cent commission will be deducted by the Society on all sales effected.

8. Every possible care is taken of work sent in, but the Society cannot accept responsibility for loss or damage.

Entry form can be obtained of Mr. Lloyd, whose address is given above, or from "Camera Craft" office.

Third Annual Exhibition at the Worcester Art Museum

The Worcester Art Museum, Worcester, Mass., announces its Third Annual Exhibition of Photographs, to open October 19 and close November 18, 1906. This exhibition will consist of photographs, and only work which gives evidence of artistic feeling will be accepted. All work must be submitted to the jury, and not more than ten pieces will be accepted from any one exhibitor, whether or not more have been passed by the jury.

No work entered at the first two photographic exhibitions or which has been publicly exhibited in Worcester will be eligible, as it is desired that this exhibition shall represent the work of the current year. Every photograph must be the individual work of the exhibitor. Enlargements will be accepted provided the work is done by the maker of the negative. It is intended that all work in making the finished print shall be the individual work of the exhibitor. Entries must be mounted, and may be framed and glazed. The title, name and address of the sender must be plainly written on the back of each. Pictures will be returned as soon after the close of the exhibition as possible, and in the same manner as sent to it, unless there be instructions to the contrary.

All entries will be delivered at the Worcester Art Museum on or before October 8th. Contributors outside of Worcester may send their works by Adams Express at the expense of the Museum, and such work will be returned prepaid.

Entry blank, which can be obtained of the manager, Mr. Heywood, or from "Camera Craft" office, must be filled out and mailed to the museum on or before October 6th. A catalogue will be sent to each exhibitor.

The Amateur and His Troubles

By FAYETTE J. CLUTE

Simultaneous Printing and Developing

I have often wondered why it would not be a good idea for the man who makes bromide enlargements from a variety of negatives such as amateurs turn in for single prints, to rig up a trough under the easel on which the paper is pinned and develop the print while the exposure is going on. If any part seemed to hold back it would only be necessary for him to shield the rest of the sheet and expose and develop the lagging part a little further. The idea would need elaboration, but there is nothing difficult about it, and working in that way would certainly give the photographer a control that could otherwise be secured only after wasting a sheet of paper in finding out just what particular part of the print required dodging. Anyone who has had experience with negatives from various sources knows just how hard it is to estimate the required exposure. Two negatives of apparently the same density will prove entirely different printers in the enlarging camera for the reason that one has been produced with a developer like pyro, giving an olive brown image despite the fact that it may look quite free from the stain, while the other image has a decided blue tone with but little power of resisting light action even in the most dense parts. Of course one who experimented with this method of working could hardly expect entire success at the first trial. A certain amount of "knack" would have to be acquired and that experience which is so necessary in all photographic manipulations would have to be acquired. As a few aids to the experimenter I would suggest that the bromide paper should first be wetted so as to come to full expansion before being placed on the easel or the application of the developer will result in buckling. It would also be well to have the easel or support for the paper at a decided angle so that the solution would not run off or downward too rapidly and form streaks before the sheet could be covered with a developer applied with a tuft of cotton or a wide, soft brush. It will of course be best to use artificial light in order that the exposure be long enough to allow of development keeping pace with the printing, and one could rig up some sort of a red screen that could be interposed in front of the lens for a few seconds while it was determined just what further exposure was required. One sliding in a slot and so balanced with a weight as to rise or fall at a slight touch, suggests itself. This would have the advantage over a cap of allowing one to locate the different parts of the picture should local manipulation be desirable. A conveniently placed pair of wide-mouth bottles, one containing a strong developer and the other a solution of bromide, would facilitate local control with a small brush. Other aids to success with the method would no doubt suggest themselves as it was put in operation.

Moonlight Pictures

One of my readers has written to ask what I would suggest in the matter of exposure, plate and the like for making pictures by moonlight. He explains that he could, of course, make a trial himself, but a few words on the subject would save time and material, not only in his case, but in that of others who might wish to make a trial of this kind of work. I must really disclaim any great amount of knowledge on the subject, further than that gained by making a few exposures of that kind about a year ago. I could not find any reason for using a color screen or orthochromatic plate, although a backed plate would, perhaps, be an advantage in the case of a snow covered subject. I found that an exposure of about fifteen minutes, using a fast plate and lens stopped down to f-11.3 gave me good effects with fairly open views. With snow on the ground a short-

er exposure would, of course, answer. With the moon obscured by floating clouds the exposure would have to be increased, but the floating clouds assist in retaining better values in the sky. The difficulty lies in this retaining a sky that will print fairly dark in order that the resultant print may proclaim itself at once as a moonlight picture. It is best to work with as large a stop as permissible, and a fast plate in order to make the exposure as short as possible. Long exposures are, of course, not hard to give, but the moon, and with it the shadows move quite perceptibly during a long exposure, with the result that the shadows have a very soft edge that is unnatural. The little softness introduced by a large stop conceals this somewhat, and the large stop allows of a shorter exposure. Use the lens as wide open as possible. One other matter should be mentioned and that is that in the sky and not the shadows in the scene, lies the key to the situation. No detail can be secured in dark objects in shadow, and it is not desirable that it should, because none can be seen in the subject. The charm of moonlight views lies in the contrast between the lights and shades, and they should be preserved, even to the verge of chalkiness. With a sky that prints dark, a few deep shadows and as much detail as possible in the brightly lighted portions of the view, the pictures should be a success. The sky can often be preserved by washing off the developer from that part of the negative as soon as the outline is well indicated, and then allowing the developer to reach only the remainder of the negative by inclining the tray at an angle.

Stains from Blue-print Paper

A correspondent in Oregon had the misfortune to put a sheet of damp blue-print paper in contact with a negative for printing, causing some bad blue stains all over its surface. How to remove these spots is the query. They can be removed by immersing the negative in a one-in-ten solution of ammonia long enough to turn the stains brown, washing well and then removing the brown stains with a ten per cent solution of citric acid; following this by another good washing. We have known such spots to result from unsuspected damp in negatives placed to print on paper that was unquestionably dry. Gelatine is very absorbent of moisture, and any negative that can be suspected of dampness should be dried before a fire and allowed to cool before being placed in contact with a sheet of paper in the printing frame, particularly in damp weather.

Shutter Speeds

A correspondent in Illinois complains that he has so little confidence in the markings of shutters that he does not feel encouraged to use one of the many exposure tables or meters that promise so well. He has a camera of the reflex type, with a focal plane shutter, a view camera fitted with the roller blind type, and several other cameras fitted carrying ordinary diaphragm shutters. Taking these last first, as made today, they are fairly reliable, but their efficiency is cut down by the time lost in opening and closing to the center. With a large stop and a quick exposure, this loss amounts to a good portion of the indicated exposure. With a small stop and a quick exposure the loss is not so great. Striking an average, it is well to figure that the actual light efficiency is about one-third that indicated or rather, if there was no time lost in opening and shutting, the diaphragm shutter would give the exposure indicated. The roller blind shutter suffers in the same way. When set at instantaneous it gives about half the full efficiency as indicated, because much light is cut off in its passing the lens opening. Used at a slow speed it gives almost the full indicated exposure. The focal plane shutter practically allows the full exposure indicated as its efficiency is figured on that part of the plate uncovered at one time. This being understood, one can assume that one one-hundred-and-fiftieth of a second with a focal plane shutter about equals one-seventy-fifth with a roller blind, and about one-fiftieth with a diaphragm shutter. This is about the relative proportions as near as one can estimate. The latitude of the good plates at our disposal today will take care of any deviation, and in any case the use of a good exposure meter is a great advantage as compared with the too common practice of guessing at both the exposure and the speed of the shutter.

Notes and Comment

A New Studio Shutter

We recently had occasion to express our admiration of a handsome portrait lens—the Royal—a series of which had just been placed in the cases of one of our local dealers in whose store we happened to be at the time. At our last visit to the store the same dealer showed us a new studio shutter made by the same firm, the Style B of which can be fitted to any lens, although intended primarily for use with lenses of the Wollensak make. To these lenses it is attached by simply unscrewing the barrel and screwing on the shutter in place of the iris diaphragm; the shutter

itself acting as a diaphragm that can be set at any desired opening or full open for focusing. Style A is for use behind the lens, being attached to the board with screws, and has focusing attachment. All points of contact in the mechanism are fitted with rubber cushions, making it perfectly noiseless in operation. Both styles are the same as to the mechanism of the blades, which number ten, working on the iris diaphragm principle. The compact form of the shutter is shown in the cut herewith, which was kindly placed at our disposal.

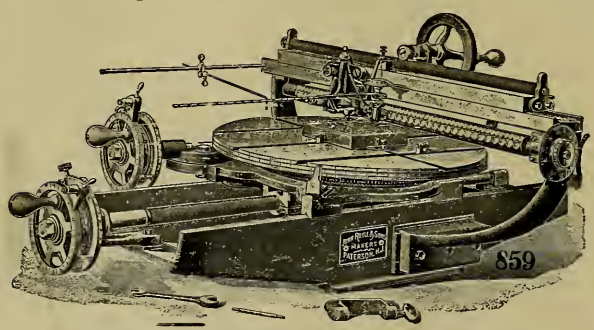
Revival of Wood Engraving

Process work some years ago took possession of magazines and newspapers, and it was supposed that wood engraving was a thing of the past. The wood engravers were mostly absorbed by process engraving establishments, and were employed in trimming and re-touching photo-engraved plates. The public looked upon the art of the wood engraver as something belonging to the past generation, and imagined that in a few years it would be counted among the lost arts.

Fortunately, there were a few conservatives, and all the wood engravers did not go out of business, in spite of the small encouragement they received. Recently a change has been going on in public opinion. People are awakening to the fact that while process work has a wide field all to itself, and while it is unapproachable in that field, it has certain limitations, and cannot take the place of the wood block. Wood engraving also has a field of its own, and because of certain peculiar advantages which are unique, it has in its way no rivals. Artistically, it holds a place shared only by the mezzo-tint. Its effects are produced by putting white upon a black ground—that is, as the engraver works he cuts away what would otherwise be black. This is the opposite of what is done in making a pen or wash drawing, where the artist is constantly adding black to his design. Of course the process block is merely a reproduction of his work. Pen drawings are particularly weak, and light in effect because the work is done in the blackest of ink; there is an inherent difficulty in obtaining strength in this mode of drawing. Wood also has another advantage in the use of a white as well as a black line. Properly handled, the wood block presents almost unlimited possibilities to the artist. When to these artistic features we add certain commercial advantages of the greatest importance, we get a glimpse of the reason why wood still persists. The engraved line is sharp, clean and has smooth sides, nearly vertical, which reproduce perfectly by electrotype, and without any difficulty. So perfect is the reproduction that no one ever dreams of using the wood block in the printing press. The printing surface

is perfect, and has ample depth, which gives another point of advantage. The wood cut is at its best upon uncalendered paper, and with ordinary paper, ink and printing, still produces clean, vigorous impressions. It gives the printer the least trouble. It is not a matter of wonder that renewed attention is now being given to the art. Wood engravers are busy, and there is really a revival of business among them.

We have mentioned these facts to explain to our readers the appearance of a new engravers' ruling machine, the Royle-Richards, a catalogue of which is just at hand. On the death of Mr. Richards, the firm of John Royle & Sons came into possession of all his papers, drawings and patterns of the ruling machine. They have re-designed it, added new features, and by means of modern machinery have vastly improved the workmanship, making a new instrument of it. The catalogue is a large and handsome piece of bookmaking from the University Press. There are two half-tones, the remainder of the cuts, nearly forty in number, are from electrotypes of wood cuts. The subjects are all mechanical except those devoted to illustrating the tints and line work which the machine can produce. Some sixty different tints, lines and combinations are shown, and these appear to be only a fraction of the possible varieties. The work



The Royle-Richards Engravers' Ruling Machine. Engraved on Wood with the Ruling Machine by Ware Bros. Co., Philadelphia.

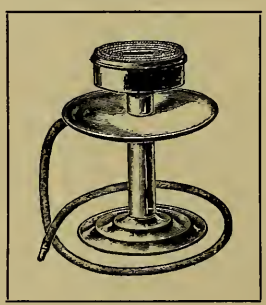
produced is so varied that "Engraving Machine" suggests itself as its proper name. Some of the engravings of complicated machines were made with only a trivial amount of hand work. The machine is really indispensable to the wood engravers.

From examples that have been given, it appears that it would be extremely useful to the process workers for backgrounds, skies, flat tints, and many other effects. Certainly, when hand tooling is used to any extent, the machine, in the hands of a man who cared to make the most of it, would become invaluable. It can work upon wood, copper, zinc, brass, and for the wax process can do any of their ruling work. The steel engraver will find it useful in working through etching grounds. The accuracy of the machine is great. Parallel lines may be ruled as fine as 4,320 per inch. On full size machines the circle can be divided into 129-600 parts. Smaller machines divide the circle into 64,800 parts. This is a number sufficiently great for all practical purposes. The real advantage of these very fine graduations is not in the fact that one ever wishes to make use of such fine rulings, but because by the use of them almost any subdivision of the inch may be obtained with an even number of teeth.

The catalogue is well worth the attention of anyone connected with the engraving business. It is intended for free distribution, and can be obtained upon application.

A Safe and Effective Flash Lamp

The Crown flash lamp is a good lamp, in fact, we consider it the best flash lamp of this size made.



It is arranged so that the magnesium powder is stored in the body of the lamp and blown up through the center of the flame. The powder is thus thoroughly consumed, and a large and powerful light is produced.

In order to fill the magazine with magnesium a removable top is provided. Long

or short flashes may be made with it. Only pure magnesium may be used.

The Crown is safe, economical and reliable. It is the most powerful lamp of its size on the market. It is well made and finished in polished nickel. The price is only $1.50, and compared with any other lamp like it every one will agree that it is worth more. It is made by Folmer & Schwing Co., Rochester, N. Y., and sold by most every dealer.

Burke & James' New Catalogue

Their new catalogue, the tenth, is now ready for mailing, and each of our readers should send for a copy. It is a handsome book of over two hundred and fifty pages, profusely illustrated with all the many specialties which this enterprising firm manufactures, in addition to the staple goods of other firms. It is encyclopediacal in its scope, and to those who have seen their former productions in the way of a catalogue it is only necessary to mention that this last is an improvement on its predecessors. The book lists everything that the professional or amateur needs, and the convenience of having such a full list and one so entirely up-to-date cannot be over-estimated. A request, addressed Burke & James, Chicago, will bring a copy.

Newly Incorporated

Camera Craft, San Francisco, Cal.

Gentlemen: We beg to inform you that on the 8th inst. the U. S. Branch Offices and Factory of the Optische Anstalt C. P. Goerz, A. G., in Berlin, have been incorporated under the laws of the State of New York. The business will continue under the style of C. P. GOERZ AMERICAN OPTICAL COMPANY, 52 E. Union Square, New York, with branch office in Chicago, Heyworth building. Messrs. Telgman and Torka remain our general agents for the Pacific Coast. This step has been rendered necessary by the steady and remarkable development of our business. It was felt that a time had come when nothing but complete autonomy would allow us to adequately forward our interests and those of our customers.

Our manufacturing plant will be greatly increased and the scope of our manufacture extended. Greatest attention will be be given to the promptest possible delivery of all orders. We need not say that the same standard of excellence which has always characterized all Goerz products, and has given them their world wide reputation, will be jealously maintained. It will be our best endeavor to remain strictly up to date in every respect, and no effort will be spared to give our customers the very best quality of goods that money and painstaking efforts can procure. The management remains the same as before. We avail ourselves of this opportunity to thank you for the kind support with which you have always favored us, and remain,

Yours very truly,
C. P. Goerz American Optical Co.,
A. K. Boursault.

Denver's New Magazine

"The Great Southwest" is a new magazine that promises well in its first issue which has just reached our desk. It is handsomely printed on good paper, and the illustrations and articles are of the highest quality. Fine half-tone reproductions of interesting photographs depicting scenes or subjects that are peculiarly typical of the Southwest or West will be a feature, and in order to insure a good supply of the best obtainable the publishers are offering a prize camera at stated periods for the best print submitted. This should make the publication of particular interest to photographers, and the wise ones who are interested in a good magazine typical of the glories of the Southwest should send at once for a sample copy. Address, The New Southwest Publishing Company, Temple Court Building, Denver, Colo.

Gold Medal to Voigtlaender & Son

At the convention of the German Photographers' Association held at Breslau in August last, an exhibition of photographic lenses and cameras as made by the Voigtlaender & Son Optical Company was awarded the first prize—a gold medal. Their exhibition was no doubt the finest of the kind ever shown at a convention, judging from the very flattering accounts which have reached us through reports in the foreign journals. It is needless to state that the goods as manufactured by this house are so well known, not only in Europe, but in the United States, that it is no surprise to us to learn that the awards were made in their favor.

Our Book Shelf

The Chemical Side

Despite its importance, the chemical side of photographic manipulation has been sadly neglected both by writers and workers. There is at present only one book available in which the photographer can find the chemistry of every-day photographic processes explained in a practical way. This is Townsend's "Chemistry for Photographers," a new and revised edition of which has just reached us. Instead of the usual dry-as-dust description of the chemical agents used in photography, this work, after a brief introduction to general chemistry, takes up chapter by chapter the particular chemistry of photographic processes; the chemistry of the photographic image; the chemistry of development; intensification and reduction; and the principal printing processes. At the end of the volume is given a cyclopedic index of photographic chemicals, with a reference to the pages where they are specifically dealt with in practice; their common names, solubilities, etc. The book is one which we cordially recommend to all who seek information on the chemical side of photography. Price 50 cents. Tennant & Ward, New York.

Three Color Work

It is interesting to note, in the advertising matter put out on the other side of the Atlantic, how much more commonly orthochromatic plates and films are used in Europe than in America. This is without doubt due, in a large measure, to the wider and better knowledge possessed by European workers of the practical advantage of the color-sensitive as compared with the color-blind plate or film. As many of our readers know, the ortho plate, by reason of its color sensitiveness, offers definite advantages apart from its better rendition of color values. In many instances the use of ortho plates will enable a worker to get better-timed negatives with a shorter exposure than is possible with an ordinary plate. Thus a rapid ortho plate will give definitely better negatives in all instantaneous work done in the early morning or late afternoon, because it is more keenly sensitive to the light conditions then prevailing. On a dull day, too, an ortho plate is away ahead of the plain plate for the rendering of shadow details. The use of rapid ortho plates with a light color screen, i. e., one which increases the exposure not more than three times, means added power in all outdoor camera work done under difficult conditions. Some hint of this is given in the paper on ortho-chromatic hand camera work in No. 76 of "The Photo-Miniature" series.

This is simply introductory to the publication of "Color-Correct Photography," by T. Thorne Baker. In this very practical manual, which is fully illustrated throughout, the practical application of ortho plates and color filters is very plainly and interestingly set forth. No photographer could read through this little handbook without adding appreciably to his fund of practical knowledge and the book deserves very wide circulation here. Price 50 cents. Tennant & Ward, New York.

For the Beginner

In the absence of any recent work for the beginner or tyro in photography, it is a pleasure to turn back to a little book comparatively unknown in this country, but among the best of photographic handbooks. We refer to "Photography by Rule," by J. Sterry, published in London two or three years ago. This work is one which appeals particularly to those who want to know how to make good negatives under varying conditions **with the least amount of trouble and in the shortest possible time.** It deals very simply and plainly with the lens and how it works; the question of illumination, with the influence of color, intensity and distance in exposure; exposure meters and other means of measuring light; developers, how they differ and how they work; the difference between lantern slides and transparencies, with practical working methods; the essential differences in printing processes

and how to choose the paper best adapted for different negatives; the practical side of enlarging, intensifying and the other processes; with two illuminating chapters on the practical application of the rules given in the earlier chapters. We know of no book which gives so clearly as this does the basic ideas and methods underlying successful negative making. Price 50 cents. Tennant & Ward, New York.

New Editions and New Books

Messrs. Tennant and Ward, 287 Fourth avenue, New York, advise us that the following new editions and new books are now ready. Some of these have been out of print and unobtainable for months, and their reappearance will be welcomed:

"Color Correct Photography," by T. Thorne Baker, the latest, and, in many ways, the most practical handbook on ortho-chromatic photography. Price 50 cents.

"The Photographic Picture Post Card," by Ward and Wall. The first edition of this, the only book on the subject, was exhausted a few days after publication. It gives all known methods of making photographic post cards, and also deals with this popular hobby from the industrial side. Price 50 cents.

"Magnesium Light Photography," by F. J. Mortimer. This is at present the only book available which deals with flashlight photography. It gives actual methods of a practical worker, with many diagrams and illustrations. Price 50 cents.

"Townsend's Chemistry for Photographers" has now reached its fifth edition and may fairly be regarded as the standard text-book on photographic chemistry. The new edition is considerably revised and enlarged. Price 50 cents.

"Photo Enamels," from the French of Rene d'Heliecourt. Practical methods of making the photographic enamels, often spoken of as Ceramics, with working formulae and instructions. Price $1.25.

"Figures, Facts and Formulae," a reference book of classified usefulness, fully described by its title. Price 50 cents.

"Finishing the Negative," a cyclopedic treatise on all the processes between fixing the negative and printing. Price $1.25.

"Elementary Telephotography," by E. Marriage. The standard work on this subject. Price $1.75.

With the above note comes a new edition of Messrs. Tennant & Ward's Classified List of Books on Photography, a very handy list giving the titles of all the books in print August, 1906, with descriptive matter and prices.

The American Annual

We have received advance advice concerning this twenty-second consecutive volume of what is now our only annual, the American Annual of Photography for 1907. It will contain over three hundred illustrations in all, twenty-four being full page ones in colors. The list of contributors numbers many of the best workers in this country, and almost every well known pictorialist will be represented in the illustrations by selections of his work. Paper covers, 75 cents, and cloth, 17 and 22 cents extra, respectively. All $1.25. If sent by mail the postage will be the dealers will have a supply, or it can be ordered direct of George Murphy, Inc., 57 East Ninth Street, New York.

Photograms of the Year 1906

The preliminary announcement of "Photograms of the Year 1906" indicates that the new volume will be more interesting than ever to American workers. Heretofore this well known English year book has been stronger in its representation of European workers than of American photography. The 1906 volume will include examples of work by Alfred Steiglitz, F. Benedict Herzog, A. L. Coburn, Dudley Hoyt, Carle Semon, Meredith Janvier, Adelaide Hanscom, Mrs. Bennett, Rudolph Eickemeyer, Misses Parrish and J. C. Strauss, Mrs. Kasebier, Elias Goldensky, and others. The workers of the eastern section are reviewed by Roland Rood; the western workers by the editor of this magazine. The French and German sections are reported to be stronger than usual in pictorial interest and we are promised some very good things from the Australasian and British workers.

The pictures will this year be given separately from the text and will be printed in a variety of inks, so that the general appearance of the book should be bright and attractive, with more individuality than

was possible in earlier volumes. A notable attempt at pictorial work in three colors by William Gill is to form the frontispiece. Altogether it seems safe to prophesy that "Photograms of the Year 1906" will be the Annual of the year, and more than ever indispensable to those who want to keep abreast of the progress of photography. The book is to be ready early, Messrs. Tennant & Ward, of New York, being the American agents. Paper covers $1; cloth bound $1.50.

Pictorial Composition

This is the title of a book that should be in the hands of every photographer desirous of perfecting his work in that all important element, artistic or pictorial composition. It is written by one who has, in addition to an art training and art inclination, has spent years in teaching what he knows to photographers, both amateur and professional. The book is well bound in cloth on fine plate paper and handsomely illustrated. The pages are full magazine size and the subject is clearly and fully covered in eight chapters dealing with such topics as Spacing, Massing, Influence of Line, Angles and Curves, Light and Shade and the like. In fact, every part of the subject is handled in the masterly style which characterizes Professor Marshall's work in his instructions to his pupils. The work orriginally appeared as a series of articles in one of our most popular photographic magazines and their preservation in a more permanent form is an accomplishment for which the publishers have the gratitude of the large number who have secured and necessarily appreciate the value of the book. "Pictorial Composition" by Prof. A. G. Marshall. Published by Photo-American Publishing Co., Stanford, Conn. Cloth bound, $1.00, paper covers, 75 cents.

Modern Methods of Carbon Printing

Marton's new treatise on carbon printing is a volume that is assured a warm welcome from photographers of every class throughout the world. It is exhaustive, practical, clear, concise and even entertaining. The advantages of the carbon process as a printing medium have never been disputed and to have a book of this character at hand is a constant incentive to the taking up of the process in order to secure all the various fine effects that are obtainable by one who is a master of the process. While no doubt much that the book contains is not absolutely necessary to the worker who aspires no higher than the making of an occasional print in carbon, there is not an unnecessary word offered to the reader who aspires to a complete mastery of the subject. Mr. Marton is well known to the profession as a carbon printer who has made the production of carbon prints a lifelong study and to say that the book bearing his name leaves no part of the subject in doubt is but speaking mildly. The book has heavy beveled covers in cloth and gold, the paper and illustrations are perfect and throughout its some two hundred and sixty pages there is carried a wealth of valuable information that to be without is to be sadly handicapped. "Marton's New Treatise on the Modern Methods of Carbon Printing," by A. M. Marton. From dealers or from Mr. Marton direct, price $2.50, postage 15 cents extra.

The Photographic Monthly for October

Two very useful little articles on the practical side of photography occur in "The Photographic Monthly." One suggests how immensely the extreme rapidity plates are over-rated for certain subjects; while the other gives the simplest method and illustrates home-made apparatus for vignetting artificial light prints. The permanence of "gum-bichromates," which has generally been unquestioned, is discussed by Harold Holcroft as the result of extensive experiments, which show that certain pigments change color materially in the making of "gum" prints, and that certain prints fade a good deal. The more pictorial side of the magazine deals with "Expressions in Portraiture," with examples by Will Cadby; criticises and reproduces five pictures by J. C. Lee, a practically unknown pictorial worker, and reproduces pictures of the year by Alexander Keighley, Mrs. Caleb Keene and H. Hendricksen. The subscription price to this country is $1.10 a year. Published by Dawbarn & Ward, 6 Farringdon avenue, London, E. C., England.

CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

PUBLISHED AT SAN FRANCISCO, CALIFORNIA

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CAMERA WANTS

Advertisements under this heading will be charged for at the rate of 50 cents each insertion for twenty-five words or less. Each additional word, two cents extra.

Wanted—A practical printer; must make carbons. D. B. Chase, 249 Main St., Salt Lake, Utah.

For Sale—At less than half list, one 4x5 Pony Premo No 7 new, with film pack, etc. Address T. J., care Camera Craft.

Situation Wanted—Bromide enlarger desires situation, is also a good retoucher. Address Wm. Thunen, Cherokee, Calif.

To Exchange—Hand-made violin value $50 for an 8x10 portrait lens or a 16x20 Rectilinear. R. J. Craker, 1702 7th St., Oakland, Cal.

To exchange—One perfect 5x8 Morrison W. A. lens, cost $25, for cabinet portrait lens of like value. Address F. A. C. care Camera Craft.

Wanted—To rent a studio in a town of about 10,000; Washington or Oregon preferred; also a position as retoucher. Address I. H. care Camera Craft.

For Sale—Kodak supply and finishing business in center of best retail section of San Francisco; small capital required. Address L., care Camera Craft.

Wanted—A 5x7 Graflex camera in good condition, with or without lens. Write, giving full particulars, to Winfield Scott, Ocotlan, Jal., Mexico.

For Sale—Leading studio in town of 3000; invoice price $400; large operating room; single slant light; fine opportunity young man or lady. Address H., care Camera Craft.

For Sale or Exchange—4x5 Eastman Plate Camera, long focus, swing and reversible back, splendid lens; complete with tripod, roll holder, telephoto attachment, three plate holders and carrying case. Want 8x10 View camera. Jos. Amrhein, Frances, Wash

Wanted—A good all round man; must be capable of taking full charge of gallery during my occasional absence. Write fully in first letter. P. B. Barnes, Leon Gto. Mexico.

For Sale—6½x8½ Rochester View camera, Darlot lens, drop shutter, tripod and three plate holders. Fine condition. Cost over $50; will take $20. Address F. W., care Camera Craft.

For Sale—Photo Studio in Goldfield, Nevada; doing fine business; well equipped; cause for selling have mining business to attend; chance to make money. Address Box No. 051, Goldfield, Nev.

For Sale—In Los Angeles, Cal., a finely equipped first class Portrait Studio; business average $800 a month; price $3500; full investigation courted on this; exceptional opportunity. Apply Dewey Bros., Los Angeles, Cal.

For Sale—5x7 long focus Ray Camera, with one dozen plate holders, tripod and carrying case, R. R. lens; all in good condition. Price $25.00 f. o. b. Address C. H. Jongejan, 331 Grandville Ave., Grand Rapids, Mich.

For Sale—A gallery in town of 2,500 population; county seat; no opposition; many small towns to draw from. Full 8x10 outfit; cabinets $5.00 and up per dozen. Good reason for selling. For particulars write Photographer, Auburn, Cal.

For Sale—One 5x7 Goerz Anschultz camera with No. 2 Dagor lens; one 5x7 Reflex with No. 3 Celor lens or will sell separate without lenses. Both outfits are new and are guaranteed as first-class by their local agents. Address J. N., care Camera Craft.

CAMERA WANTS—Continued

For Sale—8x10 Seroco View camera and outfit; used one season; write for particulars. Rose A. Drew, Viroqua, Wis.

Wanted—Amateurs having cameras (not Kodaks), 4x5 or any size larger, can earn $5.00 per week by taking pictures for us at home. Send stamp for particulars. Oval Portrait Co., Caxton Bldg., Chicago, Ill.

For Sale—Superior lantern slides of the late disaster in San Francisco. Also California slides made to order at $4.00 a dozen. J. Nasse, 1251 A Eddy St., San Francisco, Cal.

Wanted—Studio in Southern California, Los Angeles or Pasadena preferred. State class and amount of trade with prices received for work. Name cash price. Address B. H. M., care Camera Craft.

For Sale—Studio 100 miles from San Francisco; town booming; many railroads coming; factories starting; population, 7,000; only one other studio; one of the best openings that can be found in California. For particulars address S. M. T., care Camera Craft.

For Sale—Largest studio in Albany, Or.; complete up to 14x17, New York outfit; ground floor next to Postoffice in county seat of 5,000; own building myself; good lease; cleared $,5000.00 in eight years; price $800.00; wife's defective hearing reason for selling; will sell or want reliable all round man to take charge. Address C. S. Harnish, Albany, Or.

For Sale or Exchange.—Packard Bros. sketch ground 8x8 feet, with 6-foot floor cloth; light, sketchy effects for Platinum or Sepia. Perfect condition. Price $10. Also Scoville & Adams 8x10 View Camera 22 inch bellows, 2 double plate holders, canvas case, Voightlander lens and Duplex shutter. Take $50 or good wide right angle lens as part payment. Address R. X., care Camera Craft.

FOR SALE CHEAP—NEW STUDIO

The leading Studio in western city of 100,000 population; ground floor; built two years ago; big trade, well established; fine location; must sell by January 1st, as important financial interests call owner East; will sell for less than cost of fitting up. Address T. H. X., care of CAMERA CRAFT.

Wanted—10,000 photographers to learn the newest methods in carbon printing. Our new rapid process of sensitizing carbon tissue is the crowning success of all the late improvements in carbon printing. It will enable you to make fine, artistic carbon pictures in almost any tone or color you desire, as easily and quickly as bromide or platinum. No apparatus or special arrangements of any kind are required. The work of sensitizing is a simple, clean operation, quickly performed, and the tissue is dry, ready to use, in just a few minutes. No other process can equal this for rapidity and such beautiful and permanent results.

A trial package of our rapid sensitizer, enough to make 500 pictures, with full directions and many valuable pointers on the process (of which our new quick method of stripping and turning the negative film of an ordinary dry plate is worth $50 to any photographer) will be sent postpaid to any address upon receipt of $1.00 (no stamps).

Do it now. Get in line, and learn how to make those beautiful carbons on porcelain, celluloid and the new art papers, now so much used. Get ready for your holiday trade.

Remember: One trial will make you a "full-fledged" carbon printer. Martin's Carbon Studio, Bloomington, Illinois.

CHRISTMAS HOLLY

Box containing twenty branches ranging from 6 to 20 inches in length, beautiful red-berried Holly, fresh from the woods of North Carolina, sent postpaid to any address in the U. S. for **$1.00.** An appropriate Xmas gift for your home or friends. Will mail direct to any address enclosing your card, if desired. A bunch of Mistletoe will be included in all orders mailed **before Dec. 3.** Will mail any date in December.

P. C. SQUIRES, STATION D., ELIZABETH CITY, N. C.

POST CARDS AND PHOTOS
PAT. APPLIED FOR.
The Mazeograph
Process Of Finishing Photographs And Post Cards in Ten Minutes.
the greatest achievement in the science of Photography at the LEWIS & CLARK CENTENNIAL EXPOSITION Portland Oregon 1905.
C.E. Calvert. 567 Hawthorn Terrace. Portland Heights.
Portland, Ore.

CAMERA DOCTOR

G. E. BIDDELL

1885 A SUTTER STREET, SAN FRANCISCO, CAL.

MANUFACTURER AND REPAIRER OF ALL KINDS OF PHOTOGRAPHIC APPARATUS

Eastman Kodak Company

ROCHESTER, N. Y., *The Kodak City.*

NO MOISTURE.

Mounting prints so that both print and mount will dry flat and stay flat has always been a troublesome problem.

Many solutions have been offered, some of them fairly effective but entailing a great deal of extra labor and precaution.

Just so long as moisture is a component part of the process, just so long will there be liability to warp and curl even when extra heavy mounts are used, and when thin mountings are employed, entire contact without warp or curl is impossible.

Were it possible to dry all portions of the print and mount simultaneousiy, the tendency to warp and curl would be obviated, but as this is not possible, the ordinary process of mounting must always present this objectionable feature.

The dry mounting process solves the problem, print and mount are placed in contact instantly and as there is no moisture to be driven out the print and mount retain their normal flat condition, irrespective of the thickness of either print or mount.

Kodak Dry Mounting Tissue is the ideal mountant. The process—place a sheet of the tissue between print and mount, press for a moment with a hot iron, and there you are.

WORTH MORE.

Almost any combination of metol, hydrochinon, or other reducing agent, and soda will develop a film or plate and produce a visible image, whether this image will be correct in gradation and free from fog is another story.

The constituents of your developer and other formulas are of as much importance as those entering into the composition of your film or paper. For the best effect the chemicals must be pure and put together in proportions best suited to the particular film, plate or paper you are using.

No one but the maker of the film, plate or paper can so well determine the exact proportions for best results, and no one else *will have the same interest* in seeing that the chemicals used *are* pure and in the right proportion.

To obtain chemicals of the necessary purity and strength oftentimes requires time and trouble, far more than in purchasing any grade to be had in the open market. It also costs money to employ the right man or men to properly judge and compound the chemicals. This is why some developers and other preparations put up by the manufacturer of the film or paper cost more than others to be had in the market.

They cost more because they are *worth more* to both yourself and the manufacturer, as your interests are identical.

BE SURE.

The short days are almost at hand —still there is plenty of light for picture making up to sun-down.

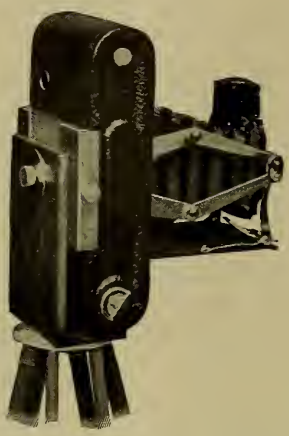
One thing to remember, however, is that if the light *appears* as bright at four P. M. in October as it did in July its *actinic* or photographic value is not nearly so great, and what would be the proper exposure for that hour in July would be far too little in October.

There are many instances where you must, to avoid motion, make the shortest possible exposure—here is where the speed of the film you are using cuts a very great figure. There is only one film classed with the fastest plates and that is Eastman N. C. (See the new *Photo Beacon* Exposure Tables.)

Be sure your film is Eastman N. C.

Eastman Kodak Company

ROCHESTER, N. Y., *The Kodak City.*



THE FOLDING POCKET TRIPOD ADAPTER No. 1.

This effective device will be welcomed by every owner of one of the popular little 1 and 1A F. P. K's. By its use the Kodak may be firmly attached to the tripod in either vertical or horizontal position and reversed without removal from the Adapter.

Invaluable for time exposures during the short days or for interior work.

Price, 75c. All dealers.

PORTABLE DARK-ROOMS.

Every once in a while we read of a new scheme for making a portable dark-room, constructed of most everything from an old umbrella frame to two by four scantling. Some you get into, others you stick your head into —a la ostrich, and others you look into—or try to. Some of them are practical, all of them bulky and at best a makeshift ; and none of them by any stretch of the imagination afford any aid in securing good results.

There is but one device that takes the place of the dark-room and that is the Kodak Tank Developer.

The Kodak Tank Developer not only renders the dark-room unnecessary but in addition supplies the experience for the novice and absolutely prevents any accidents due to manual manipulation by either novice or expert.

It has been repeatedly demonstrated that all exposures within the latitude of the film will yield negatives of equal printing value when developed in the Kodak Tank Developer and that individual manipulation during development is time wasted.

The Kodak Tank Developer not only affords the best results, but allows you to develop your film in broad daylight and in comfort.

The nearest Kodak dealer will cheerfully afford a practical demonstration.

ARTISTIC FLASHES.

There is a Kodak Way out of every photographic difficulty.

Many Kodakers are much interested in home portraiture but from business reasons find practically no time available during the day to pursue this fascinating branch of Kodakery.

The Kodak solution of this problem is the Eastman Flash sheet ; as the flash sheet is not instantaneous, a soft, even light is afforded, doing away with the hard contrasts so often in evidence.

In flash light portraiture as in everything else there is a *best* way to do it. Mr. William S. Ritch a former amateur made such a success of flash sheet portraiture that he is now engaged in it professionally; his book Amateur Portraiture by Flashlight fully explains his exceedingly simple method for securing any lighting afforded by daylight with Eastman Flash Sheets, and with greater certainty as the flash light is always uniform and under control.

Both the Eastman Flash Sheets and Amateur Portraiture by Flash light may be procured from your dealer.

Eastman Kodak Company

ROCHESTER, N. Y., *The Kodak City.*

THE ONLY DIFFERENCE.

In the earlier days of photography, the novice anxious for immediate good results hesitated long over the selection of an instrument, endeavoring to secure one simple enough in manipulation to be within his comprehension.

The Kodak system of picture making has so simplified every photographic process that the absolute novice may purchase any one of the various styles of Kodaks and be assured of good results from the start. It frequently happens that the novice desires to take up photography as a means to some definite end ; to secure the desired results, often wanted immediately, the smaller sizes of the Kodaks do not produce pictures large enough.

This is where the Kodak system triumphs, as he may purchase the 4 A Folding Kodak making pictures 4¼ x 6½ inches, almost as large as a full page magazine illustration, and he will find it as simple in manipulation as the small pocket Kodak. The same features of daylight loading, unloading and developing apply to all models, the same easy and sure method of securing correct focus, and the *same film* unequalled in speed and latitude is used in all, the *only difference* is in the size of the Kodak and picture.

Select the model best adapted in size to your purpose, follow the few simple instructions and success is assured.

VELVET ENLARGEMENTS.

Without doubt Velvet Velox is the most popular of the Velox Papers owing to its soft lustre, adding brilliancy to both shadow and high lights.

Any negative that will yield a good print on Velvet Velox will be suitable for enlarging, and all the lustre and softness of the small print may be had in the enlargement if made on Velvet Bromide. Sepia tones may readily be produced by re-development with Royal Re-developer. The making of an enlargement is a simple matter, by use of the Kodak Enlarging Camera, or by improvising an enlarging apparatus from the Kodak that made the negative.

LITTLE MESSAGES.

The evergrowing popularity of the post card is undoubtedly due to the personal interest of both sender and recipient in the picture upon it. When the picture has been made by the sender and the blank space below it carries some little message the post card becomes at once a cherished possession increasing in value as time dims the memory.

Undoubtedly you have printed your own negatives on post cards and will welcome suggestions for novel and striking effects for future ones.

The Velox Book just issued by the Nepera Division contains directions for white, black and gray borders, and for producing Velox Prints in sepia, blue and red tones.

Any Kodak dealer will present you with one.

The picture depends on the film, far more than on lens or on camera.

Look for KODAK on the Spool End.

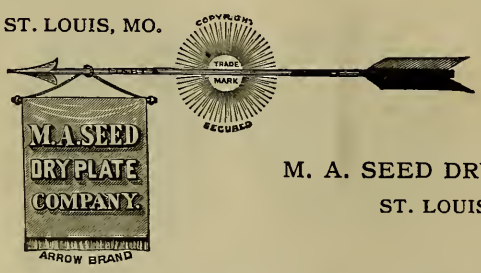
By Right of Quality

SEED

Leads the World.

The dry plate that is invariably used where quality is the only consideration.

ST. LOUIS, MO.



M. A. SEED DRY PLATE CO.
ST. LOUIS, MO.

PUBLIC LIBRARY

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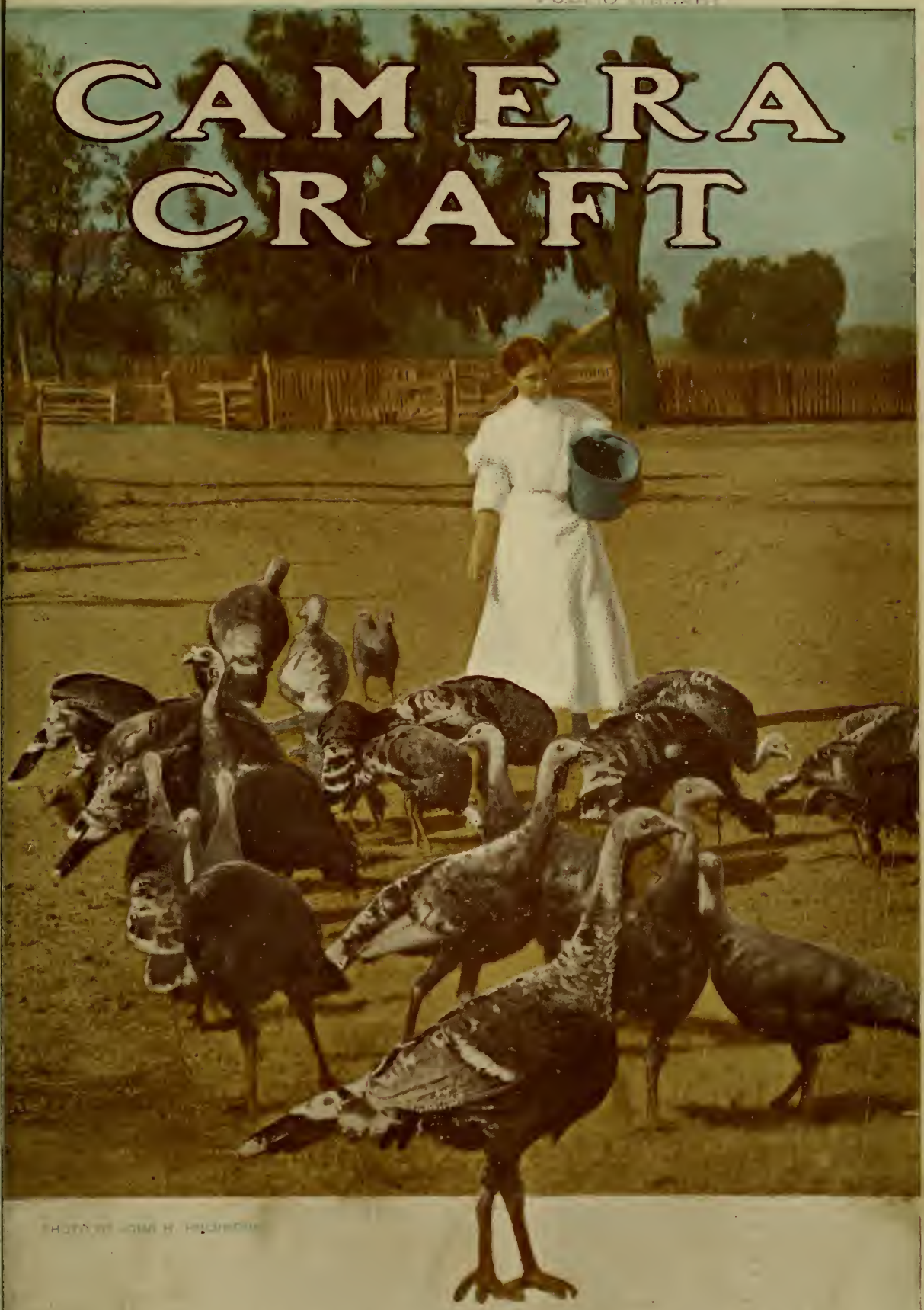

PHOTO BY JOHN H. FIELDING

SAN FRANCISCO, CALIFORNIA

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CAMERA CRAFT

1915 POST STREET SAN FRANCISCO, CALIFORNIA

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TWILIGHT
By DWIGHT A, DAVIS
Worcester Art Museum's Third Annual
Exhibition of Photographs

CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

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Winter Work

By Chas. S. Taylor

Mr. Taylor was unprepared to furnish illustrations to this article from his own negatives in time for this issue. For that reason we have taken the liberty of using some very fine winter studies by John Chislett to accompany the article and further suggest the possibilities of photography during the winter season. Mr. Taylor has not seen the pictures and Mr. Chislett knows nothing of that gentleman's position on the subject, and supplementing that fact by the additional one that both the pictures and the article show strong individuality, some slight lack of coalescency should not be allowed to detract from the value of the work of either.

Many amateurs seem to cling persistently to the opinion that Winter, with its accompanying snow, leafless trees and heavy frosts, is not a very favorable season for photography. This error is the outcome of inexperience and a lack of inclination to observe, study, and to admire Nature in any but her gayest and most brilliantly lighted moods. To many minds, the mention of Winter work pictures masses of piled-up snow, ice-bedecked trees, and frost, frost, frost! But while the greatest charm of Winter undoubtedly lies in the snow and ice, this is by no means all of Winter photography. The leafless trees standing tall and bare, the icy-bound brook, the country road with its partly broken wagon ruts; all make attractive subjects, and with proper arrangement within the picture space, are capable of making countless photographs that are well worth the doing. What observer of the great outdoors is not attracted by the rugged appearance of a wintry landscape, where the eye is held, not by a mass of brilliant colors, but by the sheer force of the simplicity of the season? This direct appeal to our love of form and light and shade, is the foremost fascination of Winter work, and in its delightful freedom from detail, we have the key note of its real pictorial worth. At this time of the year when the Summer's panorama of color is absent, we see outdoor subjects more nearly approaching the monocrome and we view a landscape with more of the mechanical vision possessed by the lens. This is the reason why we see so comparatively few hopeless failures, taken by amateurs of a tender age. The lack of color values is a great help in teaching the photographer how to compose available material, as that distracting element—color—is not present to share our attention, and we give more thought and care to the foundation of our landscape; namely, composition.

So all ye unbelievers, get out your cameras and look up the pictorial possibilities of the cold months, and when Summer comes to greet us, you

will have gained a better knowledge of expression and can better appreciate and portray the more complex Summer landscape.

In the writings of many photographers the authors have deemed it advisable to go into more or less detail concerning the apparatus employed. This subject of cameras and so on, is a much-rehearsed one, and I will confess that I am a little out of patience with what seems to me an undue prominence given to the technical side of our art-science. Directions for successfully manipulating the camera are perhaps necessary for the beginner, but to the majority of amateurs who have a clear working idea of lenses and appar-

SNOW SHADOWS By JOHN CHISLETT

atus in general, the omission of all ordinary mechanical directions is as it should be. Photography is necessarily a medium of mechanical delineation, as far as apparatus is concerned, and to lay continual stress upon the technical side is to sacrifice the real mission of any art. A practical knowledge of using our picture-producing materials is of course required if we desire to express our own personal and artistic feeling, but this is no reason why—even in pictorial writings—we should be slaves of a machine. Unlike the photographer the artist is not forever harping upon the tools of his craft; he occupies his time in a far better way, and while he appreciates the value

ON THE FROZEN RIVER
By JOHN CHISLETT

of the best technique, he only regards it as a means to an end, and that end—a picture.

In the days of Winter the air is more or less charged with fog and frost, and the picture-making possibilities of this atmosphere is by far the most valuable quality we can obtain. Among the several hundred photographs which annually come to my table for criticism—I am speaking of Winter views exclusively—almost all make the mistake of keeping the sky too light in tone. This fault upsets the tonal quality of the photograph and a proper balance between the sky and the high-lights is destroyed. Another often-repeated error is in the foreground, where often several dark—black—objects loom up in a very disagreeable and inartistic manner. Endeavor to have a well-balanced view throughout, avoiding excessive contrasts and rather aiming to secure in your photographs the peculiar delicacy of grayish softness which our eyes tell us is seldom found in any other but Winter and early Spring landscapes. This slight veiling of Nature is a great aid to the camerist, toning down the background into a misty indistinctness that is rather felt than seen. It is this appeal to our imaginative mind that holds our interest for all time. A photograph or picture that appeals to the eye alone is of but little interest and it is soon laid aside, explaining in a few words why the usual photograph with clear, sharp detail is hardly given more than a passing glance of curiosity.

There is some little difficulty in the correct judgment of this mist, and the quality as well as the quantity has its peculiar effect upon the plate. Usually more fog or mist is shown in the print than we believe exists at the moment of exposure. This is because of the wide difference in the lens and our own vision. By partly closing the eye we can more nearly see the effect as the lens will reproduce it. Try the experiment yourself and as you close your eyes you will find the effect of quantity to increase and as you gradually open them the mist appears to decrease in quite a marked degree. The quality of the mist is often of two kinds, sometimes of a yellow and again of a white grayish color. The yellow or brownish color of the fog is quite likely due to minute particles of dust and smoke and is found only in the vicinity of manufacturing towns and cities. In a photograph the yellow fog usually prints out in a very disappointing way, giving but a poor suggestion of the vague mystery we admired at the time of exposure. I have repeatedly noticed this peculiarity when photographing in the immediate neighborhood of foundries and rolling mills, and the difference in the atmosphere as seen by the eye and that depicted by the lens, has been so greatly different in the print that the entire character of the view was undesirably changed. When this yellowish fog is present it is seldom desirable to expose many plates, as the print will unquestionably show an opaque veiling of the atmosphere, which degrades the picture tones and gives a muddy unnatural effect.

Striking varieties of subjects which are rendered in a particularly charming manner by a misty, hazy background, are the views taken by the banks of rivers, lakes and streams, and in the larger towns and cities the docks with their numerous boats and shipping offer promising material. Even the

WINTER IN THE WOODS
By JOHN CHISLETT

ugly modern outline of the factory and warehouse is subdued in a very noticeable manner, and these monuments erected by the industry of man form excellent backgrounds for a bit of delapidtated wharf, or a fishing boat lying at her mooring.

But it is in the country that the most pleasing material is abundantly found, and in the leafless trees we find splendid material. In the arrangement of these grim sentinels care should be taken to bring out the individual character of each species. You will find that everything in Nature has an individuality or characteristic peculiarly its own, and a beech, oak, or any other tree, can be as adequately expressed by its form and light and shade, as well as by its foliage of varying hues. The mode of dealing with trees is somewhat different in Winter than when in bloom or leaf. It is by all means necessary to treat the entire composition in as simple a manner as possible, taking particular care not to include too much within the view. The usual mistake with amateurs, and the principal reason for many failures, is in overcrowding the photograph. This cutting out of an overabundance of material is one of the hardest problems in photographic composition and may be regarded as the rock upon which many a picture has gone to ruin. Look your chosen subject over carefully and from every possible point of view, for it often happens that a distance of four or five feet to this or that side, will change the composition very materially. Have one center of interest—one principal object—for your composition, and keep everything else subordinated. In a pleasing picture there are never two objects with just the same prominence; one must be more striking than the other. If this rule is violated we have two or more objects of nearly the same importance, each opposing the other; or, expressed in another way, variety without unity.

The complex or elaborate composition is seldom a desirable arrangement for a photograph, and where there is one successful portrayal of this type there are as many hundred failures. The simplest subjects possess the greatest charm and are, of course, much easier for the photographer to manage.

What has been said about arrangement of forms applies with equal force to the arrangement of light and shade. There should never be two high lights with the same brilliancy, or two shadows with the same degree of darkness. It is oftentimes desirable to repeat the tone of a tree trunk with a bit of decayed branch or log in the foreground or to echo the light on the water with the lesser reflection of a bright pebble or projecting stone. In this echo of the principal light or shadow, we have a very powerful aid in giving the proper balance to a view, but great care is necessary to keep this repetition well within bounds. The echo of repetition must not be repeated with the same intensity or force but, like the background, it must be subordinated that its power will help to accentuate the beauty of the principal object and not create a feeling of opposition, of rivalry.

The question of clouds and skies has been long discussed in our journals, and the general opinion seems to be "anything but white paper" is acceptable. This standpoint is nothing short of slip-shod carelessness, and it is folly to

suppose that any or every sky is suitable for all negatives. The advice (?) which has been so often given about photographing a batch of sky negatives and keep an assortment on hand to use in combination with landscapes, is certainly a funny bit of wisdom. Who but a Yankee would have thought of this photographic short cut? Truly 'tis the age of haste; ready to wear clothes, ready to wear hats, and last but by no means least, "ready to print skies"! Tiens! There is certainly a chance for some enterprising man who will advertise "an assortment of landscapes, suitable for cloud printing"!

A sky of some kind may be deemed indispensable for an outdoor view, but a satisfactory sky can hardly be made up beforehand, and, strange to say, it is seldom possible to get the two upon the same plate at one exposure, or at least I have not had the good fortune to find it so. In the days of Winter we often have a gray sky, and in the photographs of snow and ice this sky fits in very nicely. The heavy masses of cumulous clouds are sometimes to be seen at this season of the year, but these light, brilliant forms belong to the warm months and rarely look well with a wintry landscape. The long streaks of clouds known as "mares' tails," which foretell more or less wind, in their ragged, wind-blown shapes, seem particularly fitting to express the rough aspect of Winter. But, after all, the proper sky to print in is greatly a matter of taste as to the impression you desire or wish to give to the picture, and, providing we use due care in selection and do not print them upside down, or use a sky illuminated from a contrary direction, we will do the trick in a pleasing manner.

The selection of a suitable sky tint to be used in combination printing should demand considerable care, because a carelessly put together photograph will show the evidence of the means employed, which, of course, defeats the aim of our work. A number of things enter into the question of selection, and an observance of these points will perhaps assist the inexperienced to avoid those glaring faults and absurd incongruities so often seen in the collection of the novice. The first consideration is in the selection of the point of view, or the direction from which the clouds or sky is illuminated. In case a landscape or other view is lighted from the left, west or east, it is evident that the sky or clouds must be lighted from the same point, or at least have the appearance of being so lighted. Remember that the time of day and the point of view are solely given to help the novice to learn the ins and outs of selection, and it is not intended that he will adhere rigidly to this or any fixed mode of procedure. Perhaps you may have noticed this exception. Supposing the sun is in the east and the sky in this quarter is heavy with clouds, while in the west the sky is clear. It is obvious to all that the sun cannot light the landscape from the east, because of the thick veil of clouds, and the light must come from the west. Here we have a common enough occurrence and from the south and north as well as the east. I am aware that this is exactly the contrary to the advice given by many writers who lay down an inflexible rule that the photographer must adhere to the formulae, "Always photograph the sky and landscape from the same direction and at the same time of day." But I am sure you can see the folly of this

advice from the foregoing and the single instance as above given will show you that a strict following of any fixed rule cannot be lived up to. It has been often enough said that to copy Nature is to secure a natural expression, and while this assertion is true in part, it is productive of greater harm than good if carried to the silly extreme many so-called "purists" or straight photography devotees have advocated. In many of these articles the writers have misquoted frightfully, because there are many exceptions where the arrangement of Nature fails to meet our own ideas of a harmonious composition. Return to the reverse lighting example, only suppose the sun is directly overhead—at mid-day—and the sky from the east to the south is heavily clouded over, while the rest of the sky is clear. You can see that the sun cannot send its rays but in one direction, which is northward, and in consequence the photograph would have every appearance of a landscape with the sun in the north, which even a child knows is impossible. Can we call this true to Nature if we print such a cross-lighted sky in our landscape print?

While the instances above given are not common to every day, they are by no means uncommon, and are given simply to point out the frequent occurring exceptions that are bound to crop out in every rule other than that of good, educated taste.

Oftentimes one sees sun-lighted clouds printed into a landscape of a dull tone, and I remember looking at such an unbalanced view at one of our important exhibitions. The subject was an excellent one, a flock of sheep quietly grazing upon the meadows. The treatment of the subject was nicely done and it was evident that a great deal of care was taken by the photographer in arranging the composition. But the sky, ah! that was a most unaccountable blunder, and it hardly appeared possible that the same hand that produced the artistic landscape could have possibly gone so far astray in selecting the sky. The subject called for a bright and cheerful Summer sky with clouds as light as a bit of thistle down. The opposite was chosen, however, and an ideal study of peace and quiet was totally destroyed by the heavy masses of ragged clouds we often see in the wind-blown sky during or shortly after an October gale. Another mistake is commonly practiced, and this is in over printing the sky forms, making an opaque effect, wherein all the vapory, airy lightness we associate with the beauty of the sky is lost. In the development of negatives desired for combination printing, the action of the developer should be stopped as soon as the clouds have attained a little density. This transparent negative is easily arranged over the landscape portion of the print, and by reason of its clearness the trouble of registering the two accurately is almost entirely obviated.

A sky may be regarded as "fit" when it seems to suit or agree with a landscape, and it is a matter of no importance whether the conditions of exposure were absolutely correct to Nature or not when we exposed the plate. If you are photographing the sky solely for its meteorological value or to secure unusual arrangements of light and shade, faithfully copy natural conditions, but if you desire picture-producing material, don't.

The Chemistry of Development

By E. A. Turner

(Being a continuation of the article under the same heading in the last issue.)

The plate is carefully loaded and receives a correct exposure in the camera. The light image which we see on the ground glass is permitted to impress itself upon the plate for the proper fraction of a second. The deepest shadows receive so little exposure that the light action does not perceptibly change the silver bromide in the plate. These portions remain perfectly clear in the development. The half tones or semi-lighted parts of the subject receive a partial exposure so that the silver bromide is partially broken down. They develop up to various degrees of grayness. In the high-lights or brightest parts, the silver bromide is to a considerable extent, although never completely, changed by the light, and develops to a dark gray or black, which is practically opaque for the process or printing. The exact way in which the grades or gradations of opacity correspond to the degrees of lighting in the subject depends almost entirely upon the chemical processes by which the silver bromide is prepared. This is the study of the plate manufacturer, who tries to secure the "gradation" in the negative that will yield the most beautiful results in printing. Of course, it does depend to some extent upon the developing agent employed, but we find, in practice, that the final results with different agents are very similar, provided the formulae and times of development are correct.

This question of gradation must not be confused with contrast. Gradation is the quality of representation of tone values in the negative. Contrast is simply the strength of the grays and blacks, by which they are represented. Contrast is secured by time of development. A longer time of development will produce a more contrasty negative, a shorter time, a softer negative. A simple illustration will make this clear. We will load a holder with two plates, of some good make, and expose them exactly alike. The two plates will be immersed in the developer together, but one will be removed in two and one-half minutes, while the other will receive five minutes' development. After fixing, it will be seen that the first is a soft negative, while the second would be designated as contrasty. The tone values are correctly represented in both negatives, but all the parts of the negative are, in correct proportion, stronger in the contrasty one. Now, if the soft negative is printed on a contrasty developing paper, and the contrasty one on a soft grade, the resulting prints will be almost, if not exactly, the same. The degree of contrast we desire in our negatives must depend upon the printing paper used and the effect it is desired to produce.

In the illustration or example cited above I am supposing the use of a developer such as metol-hydroquinone, normal pyro, or the like; a developer that brings up the several densities in a uniform ratio from the start. If one were to use a developer that brought out the high lights early in the process of development and detail only after development was well under way, as does hydroquinone and some others, it is evident that short development

would give a steep and short scale of gradation compared to the results secured by development with metol-hydroquinone and the like. On the other hand, a developer like metol when used alone, one which starts the high lights and shadow detail in rapid succession, would give a negative with a much longer and less steep scale of gradation when development was but half completed than would our hydroquinone or strong pyro developer.

Now a word of explanation as to how the developer reduces the exposed silver bromide: A developer is a liquid that has a reducing power; in other words, it has an attraction for oxygen. The water, always abundantly present in the developer, consists of hydrogen and oxygen. The bromine, of the silver bromide, has a tendency to combine with hydrogen. When the exposed silved bromide is immersed in the developer, the developer combines with the oxygen of the water, and the bromine combines with the hydrogen, leaving silver deposited in the plate, thus:

Developer + Oxygen of Water ..... Oxydized developer.

Hydrogen of Water ..... Hydrobromic Acid. Combines with soda of developer.

Bromine of Silver bromide ..... Deposited to form image.

Silver of Silver bromide

The hydrobromic acid, combining with the soda of the developer, forms sodium bromide, which acts exactly like potassium bromide as a restrainer. It is this in part, but only in small part, that causes the used developer to work more slowly than a fresh one. The reducing agent, pyro, metol, and the like, is, of course, partly used up or oxidized, and this also causes the old developer to work with less vigor.

But this explanation offers no reason for the use of sulphite of soda and carbonate of soda in the developer. A plate can be developed with pyro alone, but the development would be extremely slow and the negative would be badly stained. Carbonate of soda increases the working strength of the pyro, and speeds up development. In the early days of photography the developer was simply a solution of pyro and carbonate. Negatives were always badly stained, due to the air oxidizing the pyro. The products formed in this oxidation are deep brown in color, and have staining tendencies. To avoid this staining we employ sulphite of soda, which combines with the oxygen before the oxygen has time to combine with the pyro. Thus it keeps the developer clear and from staining until its greed for oxygen is satisfied, but before this last takes place the plate is fully developed. Very much the same as the crew of a sinking ship works the pumps until all hands are safe in the boats. They can only take care of the water coming in, until their strength is exhausted, but by that time the purpose is accomplished.

The chemical action of the sulphite is shown herewith:

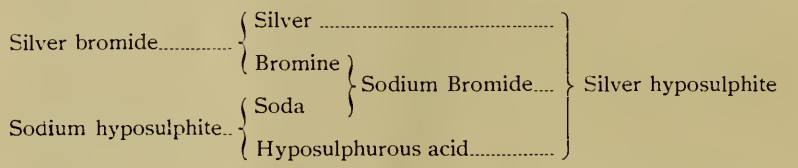
Sodium Sulphite: 1 Sodium ..... 1 Sodium } Sodium Sulphate

3 Oxygen + Oxygen absorbed from the air ..... 4 Oxygen } Sodium Sulphate

NOVEMBER TWENTY-NINTH
HAS PASSED AND GONE
By W. ROB WHYTE

The sodium sulphate remains in the developer, but being an inert chemical as far as development is concerned, it does no harm. The sodium carbonate works by its presence physically, there is no chemical action, and it is not exhausted or used up during development. The potassium bromide, often added in small amount as a restrainer and preventive of fog, also acts by its presence alone. A small amount is nearly always a desirable addition to any developer.

Thus far we have only considered the chemical actions up to the point where the negative is removed from the developer. The gelatine film carries the silver image, the unchanged, creamy, silver bromide, and is soaked full of old developer. We rinse it a moment in clear water, so as not to carry any more developer than necessary over into the fixing bath, and immerse it in the hypo. This hyposulphite of soda solution first changes the silver bromide into silver hyposulphite, thus:

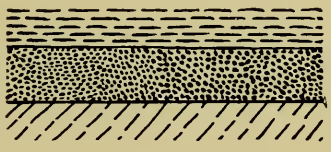


The sodium bromide remains in the solution and has no effect that we need consider. The silver hyposulphite is soluble in the ordinary hypo solution, and so is soon removed from the plate. It has been frequently mentioned in photographic literature that since this silver hyposulphite is not soluble in water, the negative should be left in the fixing bath for several minutes after the last traces of creaminess had disappeared from the plate. Having some doubts about the necessity for this, I made a practical test. Two plates were placed in an ordinary hypo bath. One was removed as soon as the last trace of creaminess had disappeared,—the other was left in for several minutes longer. Both plates were thoroughly washed and dried and kept for some months. Both were and remained perfectly clear, and not the slightest difference could be noticed. From this I consider that when all creaminess has disappeared the plate is thoroughly fixed. But one must be sure it has all disappeared. It is easy to think, in examining a plate by artificial light, that it is entirely fixed, and then to discover, on bringing it to daylight, that some yellow still remains.

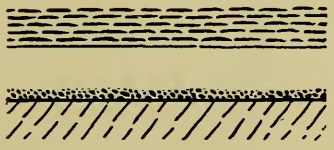
There is a simple explanation for the behavior of the plate in this experiment that may be interesting to consider. In all our work with a gelatine dry plate, we have simply spoken of the film of sensitive coating in the surface. Did it ever occur to you that this film has quite a definite thickness, and that time is required for the solution to diffuse into it, or permeate it, even when it is already soaked and swelled with water. The actual thickness of the sensitive coating on a dry plate or film, when dry, is from seven to ten thousandths of an inch. This seems extremely thin, less than one one-hundredth of an inch. The usual thickness of the thinnest tissue paper is one-thousandth of an inch. But we must remember that all measurements are but relative. We think the earth is a pretty big place, but in com-

parison with ninety-five billions of miles that lie between us and the sun, it is insignificant indeed. The film on a dry plate when under a microscope giving a thousand diameters has considerable thickness, and when looking at it under such a microscope we wonder how the solutions ever manage to penetrate through from top to bottom. Now when this film, composed principally of gelatine, is immersed in the developer and afterwards in the fixing bath, it absorbs a surprisingly large amount of water and swells to from five to ten times its original thickness. The film of a few thousandths of an inch thickness becomes, after swelling and softening, nearly one-hundredth of an inch thick, and it is this swelled film that we have to deal with in fixing the plate.

When the developed plate is rinsed and immersed in the fixing bath, we have this state of affairs:



In a minute or so the hypo has penetrated some distance into the gelatine film and has dissolved the silver bromide as far as it has penetrated. When the plate is nearly fixed, the conditions are these:



Most of the thickness of the gelatine film has been penetrated by the hyposolution and is soaked full of the hypo, with a little of the double hyposulphite of silver and sodium. The hyposolution is rapidly working its way down to the glass, converting the creamy silver bromide into the double hyposulphite of silver and sodium. Now this double hyposulphite is not soluble in water, but is in a solution of hypo. The hypo solution in the gelatine film thus transforms and dissolves the creamy silver bromide and as it disappears the negative becomes clear. Just as the last trace of creaminess disappears, we would be inclined to think that fixing is complete and to place the negative to wash—only that we are told that we must leave it in the hypo for a few minutes longer so that the hypo solution will have time to dissolve out this double hyposulphite of silver and sodium, which is not soluble in water alone.

But consider: Half the thickness of this gelatine film, yes, three-quarters of it, is completely fixed and dissolved out by the hypo before the last of the yellow, which is down nearest the glass, has disappeared. All the hypo that reaches this last quarter next the glass has to pass through all the other three-quarters. Is it not reasonable to suppose that three-quarters or

seven-eighths of the film will be well fixed and the double hyposulphite dissolved out, by the time that last trace of yellow, down next to the glass, has disappeared? Yes, but you say, how about that last eighth that is just as important as the other seven-eighths? To be sure it is, but consider again: The seven-eighths are completely soaked with a strong solution of hypo and hypo enough has penetrated the remaining eighth to convert all the silver bromide. Now, if we place this negative in water, the water is not going to reach the last eighth right away. While the water is penetrating the top layers of the film, all the hypo solution in the film is working both ways, and a good share of it is still penetrating down into the lower layers, just the same as if the negative were still immersed in the hypo solution. The hypo in the film suffices to dissolve out the portions of silver compounds in the lower layers of the film. That is why my experiment turned out as it did. And for this reason I do not hesitate at all to remove a negative from the fixing bath and place it to wash as soon as, by strong daylight, I can no longer notice any yellowness when looking at the back of the negative. In artificial light it is not easy to see the last trace of yellow, so when working by artificial light, or when the daylight is weak, it is always best to leave the plate in the hypo for an additional minute to make sure.

The Treatment of Spoiled Negatives

By D. W. Benjamin

We have all read authoritative articles innumerable describing the best method of treating a spoiled negative. Some of these suggestions are good, some of them are indifferent, and some of them are absolutely worthless. However, there is a certain treatment, a preliminary treatment, that works well with all sorts of spoiled negatives, and one that will not interfere with any subsequent application of the material. It is as follows: As soon as you see that a plate is thoroughly spoiled, that nothing can be done to make it a good negative, take your knife or the corner of another negative and mark it as I have shown in the accompanying illustration. This treatment will forestall any temptation one may have to print such a negative, and will be the means of keeping one from wasting paper in producing worthless prints.

For the Long Winter Evenings

By J. T. Dye

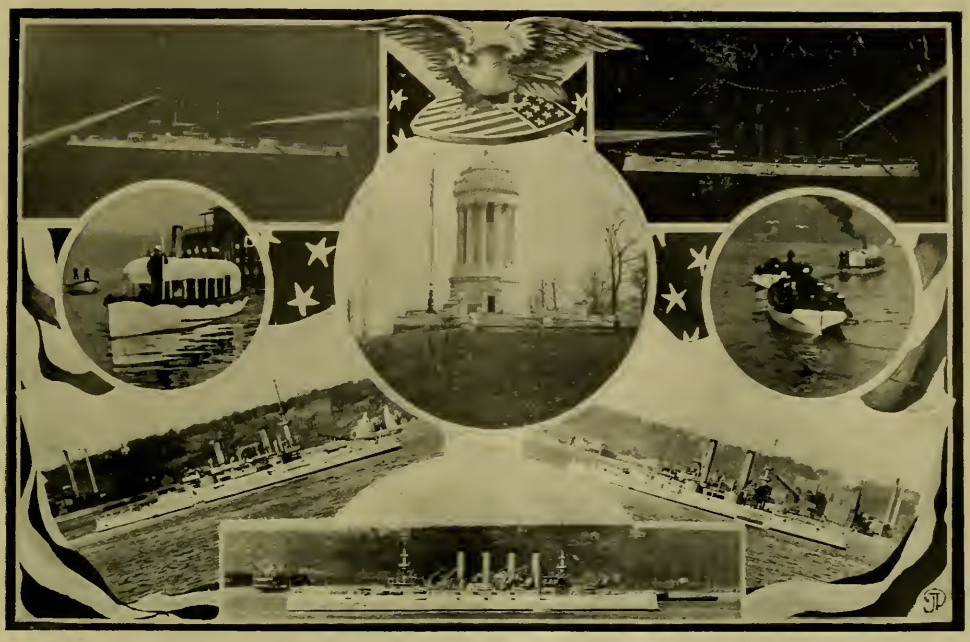
With Illustrations by the Author

Perhaps the most trying problem that the amateur photographer encounters is how to arrange the large number of photographs he has taken at different times, in some artistic way. They have been thrown carelessly in a box and perhaps the one which we prize the most has become cracked or the corners broken, and then again the prints may show fog, stains, or finger marks, which all together make them worthless, from an artistic point of view, to the one looking on. Now that the opportunity has come, I hope to show with a couple of reproductions what might be done to save these same prints upon which so much money and time has been spent.

We will first of all get a large Scotch grey card, and as it is well to keep all the pictures we have taken of one subject or place together, we will proceed by taking four or five of the best, trimming them to an equal size and arranging them in some artistic manner on the card. It often occurs that many of our prints, as stated before, show parts defective; these we can cut into circles, ovals, or diamonds, as our judgment may direct. These we can group with the rest so as to overlap or cover the uninteresting portions of the prints already grouped, as shown in the illustrations. When you feel thoroughly satisfied that you have the best grouping possible, paste the prints down, being careful to make a faint outline with pencil before removing them from their original place in the arrangement. Then take a little Chinese white and a camel's-hair brush and give the edges a little finish, putting in little details here and there—a bird in the sky, for example. Seagulls are very decorative on marine pictures, flowers and leaves on country landscapes, and so on through the list. Be careful always to get something which is appropriate to the photographs. Much care must also be used to avoid crowding or using too much decoration, as either will detract from the pictures themselves.

There is an endless amount of variation and scope for new ideas which may be executed in this work. I have often used tinted paper of various shades, sometimes fancy candy-box paper. One in particular gives very beautiful results, and that is a Japanese veneer paper.

Another way to secure a very pleasing effect is by using a rubber ball of good size, to which has been fitted the spout of a small machine-oil can. Mix up some plaster of paris in a solution of gum arabic to which has been added a few drops of vinegar, to prevent the plaster setting too rapidly. The plaster should be very finely ground and of the best quality, such as is sold by druggists. Fill the ball about half full and insert the oil can spout in the opening. By pressing very gently the plaster will ooze through the spout, and if you use this point as a pencil or brush around the edge of your pictures making scrolls and various other designs, the result is very pleasing as it produces an embossed effect. This may be left white, or bronzed, whichever may best suit the fancy of the worker. A large photograph album



may be made very beautiful in this way by decorating in this manner the pages in each case as far as taste may dictate. As it is always desirable to have something different from one's next-door neighbor, I would suggest that a single picture treated in this manner and framed will give as pleasing a wall decoration as one could wish.

For the benefit of many who devote their evenings to pyrography work, especially the young ladies, another charming effect is to get a large plaque of wood, mount several pictures in the manner described and decorate in an artistic way; if the photographs are dark, keep the background decoration light, and vice versa.

For the long winter evenings I can think of no better pastime than to get out a box of prints, separating all the different subjects, such as landscapes, birds, animals, flowers and the like, laying each in a separate pile and then, if one has a sufficient number, devote an evening to mounting each subject in this way, keeping the mounts all one size. After a few evenings of delightful recreation one would have some very pretty wall pieces, and a much lighter heart when viewing the beauty which has been created from what appeared a box of worthless prints only a short time before. Particularly so when one feels that the box contained beneath its cover fond remembrances of places visited, places and scenes that will never again be enjoyed, except in the memory which the pictures bring.

MOTHER AND CHILD STUDY
By F. H. PRATT
Worcester Art Museum, Third Annual
Exhibition of Photographs

Worcester Art Museum's Third Annual Exhibition of Photographs

October 19th to November 19th, 1906

By Lee Russell.

It is not often that the galleries and resources of an Art Museum are placed at the disposal of mere photographers and their productions, but through the public spirit of the trustees of the Worcester Art Museum, the members of the photographic craft of Worcester and vicinity are fortunate in having, each year, an opportunity to display, under the most favorable and gratifying conditions, such work of artistic merit as they may have produced. These exhibitions, including as they do, work from other sections and loan collections of the highest merit, have a great educational value for those who are trying to improve their own work along pictorial lines. They also serve as a potent factor in educating the general public concerning the wonderful possibilities of photography as a means of artistic expression. That both these desirable educational results have followed is shown by the greater interest and effort among the camera workers and by the appreciative attitude of the large numbers who have visited these exhibitions. The general interest in the artistic side of photography is unmistakably a growing one, judging by the large attendance which these exhibitions enjoy.

The prints shown this year by the local photographers bear distinct evidence of a serious effort to secure artistic results. This is in no small measure due to the fine loan collections shown last year by the Photo-Secession and the Salon Club. The local work tends this year to greater simplicity with more breadth and atmosphere, ignoring almost completely that power of the lens which enables one to secure hard, microscopic detail.

The jury of selection was composed of artists, photographers and art connoisseurs, and they evidently appreciated the desirability of employing a somewhat elastic standard in order that work showing promise might be admitted and in that way encouragement given the worker, rather than that he should be discouraged at his want of success at the start. The exhibition was divided into three sections; pictures by local photographers, pictures from outside of Worcester and the several loan collections, comprising in all about three hundred and fifty prints. In comparing this year's work of the local photographers with that shown last year one is struck with the tendency displayed to avoid mere photographic records in an effort to secure artistic and pictorial results. The work of Dwight A. Davis was particularly typical of a tendency quite general to employ breadth and simplicity and by so doing these workers have marked a distinct step in advance over their former efforts. Many of these pictures display much feeling, both in conception and treatment, and an envelopment of atmosphere that is as gratifying to the artistic appreciation as it is elusive to the artist in any medium. The variety of subjects shown by Mr. Davis proves him to be a worker of great versatility as well.

Frederic Haven Pratt displayed five studies of a mother and child which are in a vein quite different from his former style. The work being in black and white with the latter predominating, the effect of atmosphere which added so much to the charm of his other pictures, was somewhat lost. The poses were pleasing and some of them beautiful. Mr. Pratt no doubt sacrificed somewhat by this departure from his usual line of work, but his

HAULING THE NETS By FRED A. MOORE
Worcester Art Museum, Third Annual Exhibition of Photographs.

daring is to be commended. I understand that the early date set for the exhibition found Mr. Pratt without prints of his best work available, and that, rather than not send at all, some were included which were not characteristic. The writer has recently seen some of Mr. Pratt's pictures which were not open to the objection mentioned, and which showed much beauty and feeling.

George Butler showed some fine atmospheric effects, particularly in a hayfield scene that conveyed a feeling of sunshine and haze of a July day in a most realistic manner. In another print he portrays the extreme condition with a lone tree trunk that rises out of the snow and casts its bleak shadow towards the observer. In his work, as well as in that of a number of other local workers, is manifested great care in the selection of view-point, bringing about happy results in composition, while in portrait and genre studies it is evident that line, mass and lighting have been given more thought than heretofore.

KATHARINE
By J. C. LYFORD
Worcester Art Museum, Third Annual
Exhibition of Photographs

"CHRISTINE"
By LOUISE UPTON
Worcester Third Annual

WINTER MORNING
By GEORGE BUTLER
Worcester Third Annual

"CHORES"
By GEORGE J. LANE
Worcester Third Annual

BROOK AND MILL POND—WINTER
By LEE RUSSELL
Worcester Third Annual

Portraits by Mrs. Chandler, Mr. Davis, Mr. Lyford and Miss Upton, were more than likenesses, displaying much feeling and a keen appreciation of the artistic treatment best suited to the subjects. The genre work of Mrs. Chandler, Mr. Davis, George J. Lane, Frederick Moore and Herbert R. Cummings showed good pictorial treatment and attempts at composition and lighting that were in many cases most successful. In some of the work there is evidence of experimenting, and sometimes a lack of sureness and firmness which goes with the experimenting, but this is encouraging as it shows a strong effort to secure better and more pictorial results.

In pure landscape, that most popular and yet most difficult topic, there were pictures of all types and sorts, but as a whole the showing was characterized by great breadth, added simplicity and a regard for truth in values in advance of that shown heretofore. Many successful attempts at artistic selection and pictorial effects show that the local artists are putting thought and study into their work rather than placing too much dependence upon mere cleverness and manipulative skill. In this class is the work of Mrs. Frank Richardson, Herbert R. Cummings, George Butler, Alfred E. Harris, C. H. Lamphear, Frank F. Marshall, W. A. McAllister and Lee Russell.

The work shown from outside the city of Worcester maintained the high standard which prevailed last year, although individual workers have in some cases fallen a little below. The contributing members of the Salon Club did well, Mr. Knox and Mr. Clarke showing some fine examples of pure landscape work. Frederick L. Padgett, of Florence, Italy, sent some prints which were remarkable for their fine atmospheric effects and true tone qualities. F. Holland Day had a delicate study of a mother and child, somewhat open to the same objection as that made to Mr. Pratt's studies as mentioned above. A group of Wilkes-Barre workers made a most creditable showing, pictures by Messrs. Brodhun, Evans, Kaufman, Ryman and Wadhams being most noteworthy. Arthur M. Curry, of Newton Highlands, was represented by a remarkably effective head.

In the loan collection was a series of ten of the celebrated Indian pictures by E. S. Curtis, loaned by Wilfred A. French, of Boston. These alone were worth a visit to the Museum. Although a professional photographer, Mr. Curtis has the aims and ideals of an artist, and his success at portraying the character and the strength of this fast-disappearing race rests mainly on the artistic perception and knowledge of pictorial requirements which he brings to bear upon his work. A collection of eighty-four handsome photogravures from photographic portraits of men and women of Hamburg, Germany, by Rudolph Buerkoop, displayed in a most striking manner the possibilities of regular portrait work in the hands of one who is an artist as well as a photographer. Nearly every one of the examples shown indicated that the photographer had succeeded in securing not only a characteristic but a pleasing expression of his subject, in addition to an artistic portrait. They represent a wide variety of lighting and treatment and show an absence of retouching in pleasing contrast to the series of portraits of leading American musicians, which forms another loan collection. Although these last are by leading professional photographers there are but few that have artistic

THE WINDOW SEAT
(A Study in Three Tones)
By DWIGHT A. DAVIS
Worcester Art Museum, Third Annual
Exhibition of Photographs

value. They are characterized by lighting that seems artificial, and an amount of retouching has destroyed all semblance of skin texture and flesh tones.

Taken as a whole, the exhibition was a most creditable one, and the Worcester Art Museum is to be congratulated upon the success of this, its third annual photographic exhibition. Certain it is that the photographers are to be congratulated upon their good fortune in having an institution of this sort so kindly disposed as to allow them an opportunity of displaying their pictures in friendly competition, with no taint of the rivalries and jealousies which sometimes mar competitive exhibitions. Not only this but they are to be more strongly congratulated on the opportunities presented to photography of showing that it too can produce "art for art's sake alone."

OUT IN THE STORM By JOHN CHISLETT

The Demonstrator Talks

By Charles S. Ogilvie.

Developing on Tour

THE KIND OF CORN THE FERTILE SOIL OF ILLINOIS PRODUCES By C. E. WENCK

BEING somewhat of a tourist, albeit a commercial one, I have always been deeply interested in the many advertisements and suggested portable dark-rooms, described from time to time in the magazines. At least I did so until the advent of the kodak tank developer. Going about the country I have always felt the need of some sort of a utility that would allow me to develop my exposures en route. For a while I used a contrivance that was suspended from above, but I could not always summon up the courage needed to screw a large hook into a nicely-plastered ceiling and besides, sometimes the hook failed to take hold of anything more trustworthy than plaster alone; in fact, the whole contrivance came down on my head one time with most disastrous effects. I next bought a portable box with a window through which one was supposed to watch progress within. I could look inside all right, but what I could see was not of much value as an assistance to the manipulations being made. I fought against the idea that a mere machine could secure results equal, much less better, than those resulting from individual development. My belief to the contrary was very strong and I gave it up only after being compelled to do so by overwhelming evidence as to the weakness of my position. Now I use one of the 4A kodaks and develop with a tank, enjoying the comfortable assurance that the results will be as good and better than I could secure by the more vexatious method of using a dark-room or a makeshift. It has been proven beyond dispute that the tank will handle over and under exposures, within the wide limits of the film, to better advantage than ordinary development, and that is good enough for me.

"Home-Made" Bromide Paper

I was in a gallery in one of our southern cities the other day when an order came in for a bromide enlargement from a certain negative that was wanted for a rush reproduction in a morning paper. The local stock houses were all closed and not a sheet of bromide paper in the place. This did not seem to worry the printer in the least. He took a sheet of ordinary

printing-out paper into the dark-room, floated it two or three minutes on a bath and hung it up to dry while the negative was hunted up and focussed for the desired enlargement. Asking a few questions I learned that the bath was a two-and-one-half per cent. solution of potassium bromide. It changed the coating of the paper into what was practically a bromide emulsion that would require about double the exposure of the regular kind. The results secured were quite satisfactory, particularly so for the coarse screen effects of the newspaper reproductions, as I discovered by waiting until the print was developed and fixed. The sheet of printing-out paper, after being floated on the bromide bath, was hung in such a position that the air circulated all around it, and this air being that which was well heated from the close proximity of the box containing the enlarging lamp in the next room, it dried in a remarkably short time. The hint is a good one, and it may enable some worker to avoid disappointing a customer when a print is wanted in a hurry.

Making "Doubles"

This same professional had another excellent scheme which is worthy of mention. Like so many other professionals he makes two positions on one plate, only he does it differently. The extended hood of his lens is fitted with two doors, so adjusted that by making an exposure through one opening he secures a pose on one end of the plate and then without moving the camera he asks the sitter to step around to the other side of a small table, when an exposure is made through the other door of the hood. Both come on the same plate in the form of an excellent "double," and while both exposures are as entirely satisfactory as single portraits ordinarily made with the ugly mark between, he can show his customers the two made as one print, and the number of orders he secures for these "doubles" from people who would never be suspected of wanting anything so frivolous surprises everybody connected with the place. Besides this, the operator often finds that the pronounced change in lighting gives him unexpected fine results. One is too inclined to select a certain spot for the sitter and then neglect making a change through fear of seeming to lack decision, or through fear of moving the sitter around too much. Some of the negatives he had secured in this way were remarkably effective. One in particular pleased me greatly, representing as it did a young lady seated at one side of a table looking up at herself standing at the opposite side. In another the subject was pictured as walking through parted drapery to meet herself coming from the other side. Hundreds of such arrangements will suggest themselves to any operator, once the plan is given a trial.

My Post Card Friends

When I first started to send out these popular reminders to my friends I simply masked out a portion of a negative and printed it on the end of a card, feeling that if the picture was an interesting one and the work was well done, I had achieved quite a success. All this is changed now. Since I have been turning them out with various combinations of white, black

and gray borders, the kind that show the picture sharply outlined as a square or oval on the white of the card seem crude and unfinished in the extreme. Get a copy of the Velox Book—any dealer will present you with one—and try some of the novel effects that can be produced by following the directions so clearly given. Even the ordinary blue-print process will yield some of the most pleasing effects imaginable if printed so as to show a neat border in tint around the picture itself. One that I received recently is worth mentioning here for the reason that the idea is one that should commend itself to a worker of good taste. The picture proper occupied one end of the card, surrounded by a neat border, but that was not all; the rest of the card carried a continuation of the border design somewhat after the style of a delicate wall covering, just enough to relieve the excessive whiteness of the card, and the design breaks up what would otherwise be the blank space just enough to give the whole a very dainty and finished effect.

Some Fine Enlargements

About the neatest thing in the way of pictures that I saw on my last trip were some vignetted heads on Velvet Bromide paper. And, mind you, they were the work of an amateur and the enlargements were from small heads made with a Premoette, some of them enlarged from six to nine diameters. The entire absence of the ordinary soft, round lighting of the studio gave the resultant enlargements a very sketchy effect which was heightened by the lack of sharpness consequent upon his method of working and the amount of enlargement secured. The small negatives were first printed on Solio paper and without toning these prints were copied in a soft light, using one of the cheap enlarging lenses that slip on over the one in the camera. These negatives were of course originally intended for contact printing but happening to use one of them in the kodak enlarging camera it was discovered that the results, at least from these outdoor negatives, were better than when using the original negatives, besides avoiding the extreme long distance between lens and paper in enlarging. Vignetted and then toned sepia with Royal re-developer, the enlargements on Velvet Bromide paper which were shown me, certainly had a charm that it would be hard to secure by any other method of working.

Instructing the Beginner

The old dealer knows the difference between starting out a beginner today and performing the same operation a few years ago. At the same time he does not appreciate the fact that it is this same added facility that is responsible for the almost universal popularity of kodak photography. The amateur of a few years ago did not undertake the instruction of a novice without first feeling sure that the enthusiasm of the noviate was genuine and stable enough to insure his overcoming the difficulties. Even then the task was a trying one. The beginner would get started with his instructor's pet developer but results not being perfect, some other formula would be tried. His idea of a dark-room or of the requirements to be fulfilled in load-

ing and developing were vague in the extreme. He occasionally got a fairly good print through the toning and fixing bath but even that did not avail; the mount would promptly curl up and disclose the fact that the results were those of an amateur who did not possess a burnisher in which they could be rolled smooth and flat. Today the matter is different. With the kodak system there is no dark-room needed. It is realized today that while most any combination of pyro, metol, hydroquinone or other developing agent with an alkali and water will develop an image on the plate or film, the maker alone knows the best combination for his particular emulsion, putting it up in convenient form from reliable chemicals ready for use. One can not go wrong there. Printing on the gas light papers is simplicity itself and besides the process is so near a duplicate of the developing of the film that it is easily understood. Even the mounting of the finished print has been robbed of its terrors by the dry mounting tissue. With it, prints may be mounted on the thinnest paper without the least danger of curl. Things have really come to such a pass with the kodak system that one now wonders how poor results can be secured, instead of feeling surprise when a beginner achieves passable results during his first year or so of photographic experience as was the case not so many years ago.

Work for the Winter

As winter comes on, the wise amateur will invest in a good tripod and prepare to make time exposures with his kodak. After a summer spent in making snaps bordering dangerously near to under exposure, there is a large measure of delight in working with a camera on the stand. Get acquainted with the possibilities of the flash sheet. It places in your hands a power equal to having a good strong stream of soft daylight always at command from any direction desired. Get one of the kodak portrait attachments that cost a quarter. Get "Amateur Portraiture by Flashlight," written by William S. Ritch. Your dealer will obtain it for you if his supply is exhausted. When you get your tripod get one of the new tripod adapters that you will need for your little 1 and 1A F. P. K. Then try your hand on portraiture. You will find it much easier to use the flash sheets than the light from a window. The place best suited to the subject is rarely where the light is right for a good portrait but the flash sheet can be moved to any point desired. Further, it can be so placed that the background of wall, wainscoting or the like can be kept in shadow and thus give those soft, dark effects in the background that save a "home portrait" from being a picture of the wall paper and other distracting details. In other words, the outlined way of working seems to play into the amateur's hands at every point. The flash sheets are as portable as a package of post cards and they can be pinned up wherever it is thought advisable to secure any particular result. While you are at it, try the effect of a combined daylight and flash. Some very pleasing results can be secured in that way. A little experimenting will prove most interesting.

CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

FAYETTE J. CLUTE, Editor and Proprietor

1915 POST STREET, SAN FRANCISCO, CALIFORNIA

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Our Pacific Coast Workers in the Third American Salon

A list has just reached this office giving the names of the Pacific Coast workers whose pictures were accepted by the final jury of the Third American Salon. In sending this year's pictures we were greatly hampered by being in Sacramento at the time, with the address of most of the local workers uncertain, making it problematical as to their receiving the notices. Besides this, many of those whose pictures would have added greatly to the strength of the collection sent, lost all their negatives and prints in the fire. The good condition in which last year's pictures were returned should have prompted a much heavier sending and would certainly have done so under normal conditions. The list of accepted pictures is as follows: Laura Adams Armer, Berkeley, "A Head"; Dr. Gustav Eisen, San Francisco, "Going to the Harvest," "Evening in California"; Helen Plumel Gatch, Salem, "The Marsh," "The Wrong Key," "The Hemlocks"; Adelaide Hanscom, Seattle, "Hope," "Mother and Child"; Calista Moore, Salem, "The Water Carrier"; Emily Pitchford, Berkeley, "Portrait of C. F. Neilson," "Study in Curves," "Summer," "Portrait of F. H. Meyer"; and Charles E. Townsend, Oakland, "Mt. Tamalpais After a Rain" and "In Marin County." This is a remarkable showing, considering the few pictures sent, and the fact that but two hundred and seventy-five are to be hung. Our local workers are to be congratulated and it is hoped that their success will inspire others to contribute generously to our next shipment. Our Pacific Coast workers have always fared most handsomely with the jury of selection for these salons, and they can hardly do less than send a generous supply of their best work each year.

Back Numbers Wanted

While our own file is complete and one for Dr. Power almost so, thanks to the kindness of our subscribers, we would like to secure copies of the issues of the following dates: May, 1900; June, 1900; June, 1902; December, 1902; February, 1903; May, 1904, and January, 1906. We must insist that subscribers do not break files to send us these issues, as we want them only in case one or more of them are in the hands of the sender in the shape of odd numbers.

Two are wanted to complete Dr. Power's file and the other five to fill out sets of subscribers having almost a complete file. We have filled out a

number of such nearly complete files of certain subscribers by drawing upon the list of badly broken files sent in by others, and the favor has in all cases been greatly appreciated. We will, as heretofore, extend the subscription of a subscriber two months for every such number that we desire which he may be so kind as to send. If you have one or more of these seven numbers, send them along without thinking that someone else will save you the trouble; that is, if you can do so without breaking a file.

Lateness of this Issue

This magazine has been behind in its date of issue since the fire some months ago despite our best efforts. While it was the first regular magazine published in San Francisco to get an issue in the mails after that disaster, we have been greatly disappointed in the matter of catching up with our dates. The high quality of work demanded and the size of our editions has increased the difficulty to an enormous extent. The getting together of a plant capable of turning out this magazine is the work of months. Additional presses demanded a new building and that was secured. A severe wind storm removed a portion of the roof, and the rain which fell at the same time destroyed and damaged our last issue under way, necessitating the reprinting of a great portion of that number. We trust our friends will bear with us and accept our assurance that no effort is being spared to get the magazine out as promptly as possible.

To Our Contributors

We have in type several excellent articles which have been crowded out from month to month owing to the lateness of our issue. The September issue was crowded as much as we felt was possible with the excellent addresses delivered at the Spokane Convention. Our last issue gave space only to timely articles and two additional addresses held over from the September number. This number contains a report of an exhibition that would not be timely a few months later, and the articles are mainly on subjects appropriate to the season. A report of the Oregon Camera Club's most successful exhibition has to be held over for want of room, and some excellent pictures and a brief not on the work of the Indianapolis Club is also awaiting space. We trust our many kind contributors will accept this explanation as to the reason for the non-appearance of the articles which they so kindly sent at a time when their arrival was most welcome. Had we been able to have gotten out our magazine promptly they would all have been used long ere this. The delay is in no way indicative of the slightest lack of appreciation on our part of the many good articles in our hands.

Probus in the Northwest

Mr. Wolff, of the firm of Wolff & Dolan, has just returned from a business trip through the Northwest, where the popularity of Probus, as indicated by the large orders secured, more than exceeded the most sanguine expectations of this enterprising firm.

A Photographic Digest

By H. D'ARCY POWER, M. D.

All communications for this Department should be addressed to H. D'Arcy Power, M. D., Burlingame, San Mateo Co., California

Pinatype

Leon Vidal gives a modification of the ordinary process in a past number of the "British Journal of Photography," with the following details: "Judging from what has already been written concerning the process of pinatype there seems yet somewhat more to be said with regard to this process of polychromy which is extremely interesting and capable of giving very satisfactory results.

Without trenching upon anything that has already been published with regard to this process it is possible to suggest a method of utilizing it which is fairly easy and for making prints on paper not by successive imbibition but simply by transfer from the glass onto the paper of a composite image printed in the necessary successive operations on one piece of glass which acts as the temporary support. Obviously when utilizing the color saturated print-plates for printing on to paper it is only possible to attain without ulterior aid to a certain luminosity which is extremely interesting and which may be applied artistically, but it is not possible to obtain prints at all comparable either in brilliancy or depth to those developed on glass.

The following is the method I suggest: A sheet of glass somewhat longer than that required for the actual print should be thoroughly cleaned, then polished with talc, and finally coated with a 2 per cent collodion, and on this collodion which must be provided with a safe edge must be coated a film of bichromated gelatine of the following formula:

Gelatine, good hard.....	5 parts
Ammonium bichromate	2 parts
Water	100 parts

The gelatine should be first soaked in water, then melted by the aid of heat, and the bichromate added and the mixture filtered. The collodionised glass should be placed on a carefully coated support and one hundred minims of the above bichromate gelatine coated on every sixteen square inches of surface. When the gelatine has set, the plate should be reared up to dry in a dark and fairly warm place.

The first print should be either the red or the blue, and after the plate has been exposed by the aid of an actimeter it should be washed with acid sulphite of soda to decolorize those parts of the image which were affected by light, and it should then be stained up in the pinatype red. It is advisable to rinse the plate from time to time and place it in a dish of clean water, film down, on a sheet of white paper so as to judge of the density, as this is better than looking through it. When the desired density is obtained the plate should be washed and then immersed for five minutes in the pinatype fixative, again washed and dried.

The plate again leveled should be again coated with the bichromate gelatine and allowed to dry and then exposed under the second, the blue, transparency. It is advisable to use a magnifying glass to ensure absolute registration of the image. The red plate should be supported between two plate boxes, for instance, over a sheet of white paper, and after approximate coincidence has been obtained the final adjustments should be made with the eye-piece and the edges or one edge fastened together with a lantern slide binder, ne varietur, after which it should be again examined with the eye-piece to make sure there is no shift, and then it should be exposed with or without a printing frame. After exposure the procedure is precisely the same as indicated

for the red image. The blue image appearing in contact with the red, it is easy to judge of its density, and the plate should be well washed and then laid face down on white paper, otherwise it is easy to spoil the print.

After development the fixative should be used and the third film of bichromated gelatine should be coated on the top of the two images and dried and exposed under the yellow transparency and stained and treated as the others. It is extremely easy to judge of the intensity of the staining by placing the plate, film down, on paper. The plate must be again washed and treated with fixative and then coated with a plain three per cent solution of gelatine. This film acts as an adhesive medium for the final print. Any gelatinized paper or the pinatype papers are excellent for the final support. It is only necessary to soak the papers in water and the composite image, and bring the two into contact and then squeegee well, so as to obviate air bells, and then dry between blotting paper. When absolutely dry the margins should be cut right through with a sharp knife, and the print stripped. In order to avoid accidents it is advisable to use a cutting glass of the exact size of the print required, and by this means one avoids the possible mischance of one side lifting before all four are cut through. If plate glass is used the surface is very brilliant, possibly too much so, but it is extremely easy to reduce this effect by using ground glass for the primary support.

It is hardly necessary to apologize for the exact and minute directions given above, for I know from experience that beginners are easily discouraged by failures due to insufficiently precise instructions.

Enlargements in Gum

In line with the above novelties is the work of Dr. Hiecke in Austria who has recently succeeded in making direct enlargments in multiple gum bichromate. His method is, first, to increase the sensibility of the gum mixture by coating some time before exposure; secondly, by permitting direct extraneous light to fall on the sensitive surface while the printing is going on I have occasionally noticed that when a hopelessly underexposed plate is lying in the developer without any image appearing, if the actinic light be allowed to fall on the plate the outlines will often appear. Apparently the secondary illumination used by Dr. Hiecke must act in an analogous manner. He used an arc lamp in combination with a seven inch lens working at f-5 and for the supplemental light two thirty-two candle power incandescent lamps, one on either side of the print at a distance of about fifteen inches. Twenty minutes exposure sufficed for a good print.

Ozobrome

I gave in a past number the formula for the pigmenting solution as specified by Mr. Manly. Since then I have made up some of the solution, and tried it with a bromide print and ordinary warm black carbon tissue. I had no difficulty in converting my bromide into a good carbon, or using the second method, making a carbon copy from the original bromide. The process calls for a special carbon tissue, one much richer in pigment than that in general use, and my prints were, therefore, too weak, but otherwise perfect. Mr. Manly has recently issued some new instructions, which I here append (vide "Photography"):

"It is possible that one part of the concentrated pigmenting solution to five parts of water may not be strong enough completely to bleach a deeply-printed enlargement. Perhaps one part of the concentrated solution to five parts of water might be considered as the average strength of the pigmenting bath. This strength will keep better than one part to five parts water.

"In method No. 1 the bromide picture should be printed with a white margin of about half an inch all round to serve the purpose of a safe edge so as to prevent the edges of the picture from frilling during development. In contact printing the margin formed by the rebate of the printing frame is generally sufficient, but in making enlargements the margin of the bromide paper should be protected. This may be easily effected in the following manner:

"Take a sheet of cardboard the size of

the bromide paper (the straw packed with the sensitive paper will answer admirably), paste or glue strips of thin cardboard or stout paper of any color along each edge of the card, allowing about half an inch of the paper to project from the edge. When dry turn the half-inch edge over the card so as to form a kind of sheath such as is used for carrying plates in some magazine hand cameras, but, of course, with four edges protected. This forms a very handy contrivance which will be always serviceable. When about to expose, slide the sensitive paper into the sheath by unbending one side and replacing it. Adjust on the easel by pinning through the card.

"In method No. 1 the bleached image beneath the carbon picture may be redeveloped partially or entirely, and this may be made use of in various ways. For instance, a weak bromide may be converted into a strong print by reblackening the underneath image, and many beautiful effects may be secured by causing the re-developed silver to modify the tone of the semi-transparent carbon picture.

"If a weak developer be applied with a brush, local intensification may be effected and a sky which is hardly strong enough for the rest of the picture may be made heavier in this way. The underlying image may be also toned by the various bromide toning solutions. Of course, the developing or toning solutions must be removed by washing for about fifteen minutes. The re-developed silver image being protected from the atmosphere by a layer of hardened gelatine is naturally much more permanent than an ordinary bromide print."

Printing Gum and Carbon in Sun-Light

Herr W. Struck, writing in the "Photographische Mittheilungen," describes some experimental work to the effect that when pigment prints are made in direct sunlight, the effect is due partly to the heat rays. Some years ago, when gum printing was first resurrected by Demachy, I was enjoying the frizzling climate of Sacramento. I first made my gum prints in direct sunlight, but soon gave it up for the slower printing of diffused light, and without having made any exact experiments. I then came to the conclusion that the heat was a factor, and that it tended to insolubilize the gum beyond the region of direct illumination, leading to flatness. In recent years, working under the cooler rays of the San Franciscan climate, I have not found direct sunlight so harmful.

Some Problems of Judicial Photography.

R. A. Reiss, writing in the "British Journal of Photography," says:

"M. Bertillon was the first to point out that when certain inks were used for writing and that when the paper, as soon as the characters were dry, was pressed into contact with another sheet of paper, there was produced on the latter an invisible impression which could be rendered visible by heat. Later, I completed the work and found that the effect was produced by the acid in the ink acting on the sizing, and that neutral and basic inks did not act in the same way.

"Experiments were then made to find a method for reproducing the invisible image without in any way damaging the documents. The paper which was suspected to contain the invisible image was pressed into close contact with a piece of P. O. P. and left in contact in the dark for from six to twelve hours. The sensitive paper was then exposed to light till it was blackened, and the writing was then clearly legible in metallic characters on a dark ground.

The defect of this method was that the characters were faint and could not be easily photographed, so another method was tried. The papers were pressed into contact as before, then the P. O. P. was exposed till the ground turned a reddish violet and then physically developed. The ground blackens, but the characters gradually appear with a metallic sheen and development should be continued till they are quite legible. The developer used was a 1 per cent solution of pyro plus 10 per cent of glacial acetic acid. To obtain black proofs on a white ground it is only necessary to place the back of the P. O. P. in contact with the paper containing the invisible characters.

Club Notes

The Boston Camera Club

An exhibition of the work of Wendell G. Corthell was held in the rooms of the club, 50 Broomfield street, Boston, Mass., December 10th to 22nd. The pictures shown elicited much favorable comment and were worthy of great praise. They consisted mostly of studies which Mr. Corthell secured during his recent trip abroad and bore out that worker's reputation for keen artistic perception and a thorough mastery of photographic manipulation. The club is to be congratulated on securing such a fine display of work, and Mr. Corthell is alike fortunate in having the co-operation of such an appreciative organization.

Photo-Secession Exhibitions

The announcement reached us just too late for the last issue that the Photo-Secession would give their second series of exhibitions at the Little Galleries, 291 Fifth avenue, New York, beginning November 1st and ending December 13th. This opening exhibition is devoted to the work of the members, and from reports we have had is even superior to the one held last winter and which proved such a success both from the artistic point of view and the gratifying one of popularity and interest as judged by the large attendance. This will be followed by others given monthly and showing the work of both American and foreign pictorial photographers. All who can do so should visit these exhibitions, as their educational value can be but of the greatest, showing as they do the accepted standard of photographic pictorialism at the present time.

The Wisconsin Camera Club

Reports reach us that this club is in a most flourishing and encouraging condition. They are constantly introducing special features such as outings and the like, a Hallowe'en party being a particularly enjoyable variation some weeks ago. At one of the meetings of their executive committee following closely upon the visit of Mr. Sleeth of Pittsburgh, Secretary of the American Federation, the club decided to join that body and secure the exhibition which they have gotten together for 1906, for Milwaukee. Their gallery is now fitted out with a fine assortment of new backgrounds and an electric light enlarging equipment has been installed. The membership is now around the one hundred and fifty mark with every prospect of its increasing steadily. The club is fortunate in having an enthusiastic set of officers and a membership that is harmonious and ambitious.

The Metropolitan Section Meets

The Metropolitan Section of the Professional Photographers' Society, of New York, Mr. E. B. Core, President, held its first meeting since the summer, in the parlors of the Milton Waide Metropolitan School of Photography, Inc., 32 Union square, New York City, Tuesday evening, October 9th. As is the usual custom of this body, the meeting was full of business discussions, interspersed with social "get-togetherism." Experiences of Messrs. McDonald, Byron, and Falk during their summer vacations in Europe were agreeable diversions, and all together the meeting was one of the Section's best.

Curtis & Cameron's Platinum

Messrs. Curtis & Cameron, publishers of the Copley Prints, offer for general sale a sepia platinum paper of their own coating, which they have named "Harcourt Sepia," for which they make the following claims: It is distinguished from other platinum papers by the superiority of its printing in tone and quality, by simplicity of manipulation, and by evenness of product. Samples are sent without charge, and correspondence is invited with photographers and others interested. There are two grades: smooth, and medium rough. Additional grades will be announced from time to time in gray as well as sepia. The sepia is for cold developer, in a plain oxalate bath, no sepia solution being used.

The Amateur and His Troubles

By FAYETTE J. CLUTE

An Inexpensive Still

I found an efficient and simple form of still being used in the laboratory of an amateur friend recently, and a brief description might prove interesting to my readers. A quart size Mason's fruit jar was used as the vessel in which the water was boiled. The bottom was covered with a piece of wire netting folded so as to form a hood, and serving to distribute the heat from an ordinary oil lamp. The porcelain lining to the zinc top had been removed, a hole made in the screw top and the end of a piece of tin-lined half-inch pipe soldered to fit. This piece of pipe was about three feet long, and after rising a few inches above the top bent downward at an angle so that its length inclined about forty-five degrees. This tube was wrapped with a few turns of loosely woven cloth and carried in a trough so that water could be allowed to flow upon its upper end and travel the length of the pipe, causing condensation. While the jar fitted with the wire netting case at the bottom is practically safe against any heat which the lamp may give, it is best to turn the flame up but a little at first in order to avoid danger of breakage. It is a good plan to have the top or cap to the jar soldered to a firm support, and the jar then can be placed in position by screwing it into this supported cap. Two of the rubber rings should be used to insure a good and tight fit between the cap and jar. A simple contrivance such as this will enable the worker to secure distilled water at a few minutes' notice, and in a laboratory would prove quite convenient for experimental and demonstrative work.

Cement for Glass

A correspondent in Illinois writes that he remembered in reading CAMERA CRAFT a couple of years ago that a long narrow tray made out of strips of waste glass such as one could obtain from the glass dealer who cut them off in cutting special sizes, for almost nothing, was just the thing for developing strips of film, inserting them edge downward instead of flat. He wants to make such a tray but must have a formula for the cement. The following is one that will fill his requirements:

Litharge (finely powdered) ..3 drachms..
Fine white sand .....3 drachms
Plaster of Paris ..... 3 drachms
Resin (powdered) ..... 1 drachm

After mixing these thoroughly into a paste with linseed oil to which a little dryer has been added it is allowed to stand for about four hours. It must then be used within the following four hours or before it has a chance to become set. It is an excellent cement for glass and porcelain, uniting their surfaces so firmly that they will break in a new place before the cement will allow the mended portions to separate where originally cracked.

Developing Color Sensitive Plates

A correspondent who has been experimenting along this line writes, making a good suggestion that it might be well to consider. He says that, supposing it was desired to develop a red sensitive plate for which a green light was best suited, the addition of a red coloring to the developer would practically be equivalent to developing the plate in absolute darkness. In like manner, developing a green sensitive plate by a red light, it would only be necessary to color the developing solution green to secure the same effect of darkness. It seems that the matter is worth investigation, although I think a like suggestion was made in the "British Journal" a few years ago. In doing this, that publication called attention to the fact that if potassium carbonate be used in the developer, the addition of chryosulphite as a non-actinic coloring matter would result in the formation of an insoluble potassium picrate. Chryosulphite as prepared by

Lumiere is a mixture of fifteen parts of magnesium picrate with one-hundred parts of sodium sulphite, and they recommend the addition of about twenty-five or thirty grains to the ounce of developer.

Lens Stop Values

Repeatedly there comes to this office letters asking how to determine the U. S. value of a stop marked with its F value. A correspondent has a lens marked as working at f-5.6 and writes to ask what in would be expressed in the U. S. system. All that is required is to square this f value and divide the result by sixteen. The result in this particular instance will be 2.085 or somewhat more than U. S. 2. This rule is given in the Dalmeyer catalogue which goes on to say that: "For conversion into Royal Photographic Society's system or Dallmeyer Decimal Standard, square the f value and divide the result by ten."

Material for Backgrounds

Ordinary unbleached sheeting, or, as it is called, "domestic," is the material to use. It should be tacked to a frame, and here is where a little skill is required. Tacking the four corners first is not the right way, although the plan generally followed by the inexperienced. Start to tack the sheeting to the frame at the center of the sides and work towards the corners, tacking a little on each side in turn. The first coating is of ordinary paint, and the second is of flatting color prepared by using the color without oil, but with turpentine and a little japanner's gold size. As fast as this last is applied it should be stippled over with a dry brush. Working in this way it should be an easy matter for anyone of ordinary skill to produce most effective grounds without any great expenditure of time or cash.

Polishing Platinotypes

A correspondent in Ohio writes to ask how we can secure the fine polish he has seen on some platinotype prints offered on sale at the local art stores. He has convinced himself that they are genuine platinotypes by purchasing one of them and testing with acid. There are many formulas published for an encaustic cerate or paste. These are to be applied all over the surface with a soft rag in the form of a pad and then by going over the print with another like pad that is clean and dry the paste is apparently removed. In doing this the prints are given a fine polished surface that is particularly effective in the shadows or those parts which are inclined to be of a different quality from the rest of the print before such treatment. The following formula is a good one and one that I have secured from a professional worker who has tried many such formulae and found this last to best meet his wants.

White wax	2 ounces
Gum elemi	25 grains
Benzole	1 ounce
Alcohol	1 1-2 ounces
Oil of lavender	1-2 drachm

The oil of lavender is added after the other four ingredients have been mixed in a wide mouthed bottle by stirring while applying gentle heat over a sand bath or in a vessel of water. Continue stirring until the wax is melted and take care that the benzole is not ignited by its fumes reaching a light or other flame. Continuing the stirring but gradually decreasing the heat, add the oil of lavender just before the mixture becomes cool.

Dampness in Platinum Printing

The above calls to mind another experience, this time that of a local worker. Without giving the matter any thought he seemed to imagine that as long as the platinum paper he was using was perfectly dry there was little danger of the very difficult-to-remove platinum stains. The facts of the matter are that the drier the paper the more danger of stains, with negatives, the films of which contained the least trace of moisture. Dry paper draws the moisture out of the gelatine of the film when paper that was equally damp would set up little or no chemical action. He secured a nice crop of stains before he studied out the matter. It is well enough to have the paper perfectly dry, particularly if it is the platinum kind, but the negative is the most important, for the reason that its coating is capable of carrying a larger amount of unsuspected moisture than one could believe. I have seen negatives, apparently quite dry, give off a perceptible amount of steam when held before a good warm fire, showing clearly that moisture was being evaporated.

Notes and Comment

The New Simplex Meter

We have just been favored with one of the new Simplex Exposure Meters with figures and lettering lithographed in gold on the black of the disk and container, making a very handsome appearance, and the lettering being much more durable than heretofore. No change has been made in the form of the meter itself, as even the constant employment by its large number of users has failed to bring forth any suggestion of a possible improvement in that direction. You will find an announcement by its manufacturers in our advertising pages, and as it is sent on approval our readers should lose no time in investigating its merits. It is on an entirely different principle from anything of the kind on the American market, and as we have never met with any denial of the correctness of the theory on which it is based, and as actual practice confirms its maker's claims, we have no hesitation in recommending it to workers desirous of eliminating the trying uncertainty which is so closely associated with exposures made under unusual conditions and which to some extent prevails in even the most simple exposures.

A Photographic Trip in the Tropics

The Milton Waide Metropolitan School of Photography, Inc., 32 Union Square, New York City, is expecting to have a class leave New York the latter part of January, 1907, for the delightful tropic island of Porto Rico; return due in New York the first week in March. The class is positively limited to twelve in number, and the outing will not only be a delightful trip, giving over three weeks in this most beautiful isle of the West Indies, covering every important place of interest, including trip by coach over the old Spanish military road of eighty-eight miles, also the new military road from Ponce to Arecibo of thirty-eight miles, but will also be a very complete and exhaustive course of personal instruction in ideal and individualized out-door photography. The school will give the entire trip under the auspices of one of its directors and instructors, one who has spent several weeks at a previous trip in Porto Rico, and thoroughly knows the ground. The price is three hundred and fifty dollars per person, and includes all traveling expenses to and from and while in Porto Rico, also personal instruction of the highest order in out-of-door photography, and one week's instruction at the school after return to New York, in ideal plate and film development and the successful manipulation of Velox and Platinotype papers. For further particulars, address or call at the school. If interested, it is necessary to act quickly, as the number is positively limited to twelve, eleven persons and the instructor.

Great Light Efficiency

Your attention is called to the announcement of Root's Silento Portrait Shutter on another page of this issue. This shutter, made by the Kalamazoo Shutter Company, makers of low studio and view shutters, is remarkable in a number of useful ways to the portrait photographer. It is especially recommended for baby pictures and groups, because of its absolute silence in operation, and especially because of its ability to pass an extraordinary volume of light in a very short exposure, which makes a good negative under conditions that an ordinary sliding wing shutter would be of no avail. Of course, this feature is also of great help in all classes of portraiture, especially in dark or cloudy weather. It is claimed that careful tests of this feature show that from twenty per cent to forty per cent more light passes through the Silento in a short exposure than through the very quickest of sliding wing shutters. This is accounted for by the fact that the wings on the Silento are made from aluminum, which is the lightest metal known, and being on a revolving axis, they disappear almost instantly. This is obviously of immense advantage to the photographer in nearly every sitting. Oth-

er good points about this shutter are: It balances open, has very small outside dimensions for large openings; being made from metals will last a lifetime, and with its simple design and accurate construction is secured an elegance and durability far above the ordinary. U. S. letter patents were allowed on this shutter October 2nd, 1906.

Opening of the Daguerre Memorial Institute

At Winona Lake, Indiana, one of America's Chautauqua Assemblies, a building has been erected and dedicated to the memory of MM. Daguerre and to the preservation works of the masters in photography. In this salon are now assembled a large number of photographic masterpieces, to which others will be added from time to time that it may become of recognized importance and known as one of the world's greatest photographic salons. This salon is not only bidding to be known as one of national reputation, but workers in foreign countries are seeking information as to its meaning.

That the fame of this institute may grow and its aim become one of acknowledged merit; that the general knowledge may be advanced; that the labors of the genius may not be lost, the managers of this institute have decreed to award a diamond medal for the best picture exhibited in their annual meeting of 1907 at Winona Lake, Indiana. This medal shall be known as "The Diamond Medal of Honor" and bear an inscription of the title of the picture for which it was awarded and the name of the institute by which it was given; and the picture receiving this honor shall be hung in the salon as a permanent exhibit, its award to be inscribed thereon with date and name of maker.

In addition to the diamond medal other awards will be given, among which will be a certificate of special distinction to be given to all pictures chosen and considered worthy to be hung on the walls of the institute as a temporary or loan exhibit.

Conditions of award:

No picture shall be passed upon for this honor that is not properly titled. Should the excellence of the picture chosen for this honor be judged not to equal the one chosen as best at our last annual meeting, then the trustees reserve the right to retain the medal. Publication and use of picture shall be under control of trustees. Pictures shall be passed upon by two distinct sets of judges. The one selecting a number of three to five pictures, the other select the one. Any false claims made by winner of medal forfeits all honors, and at request of trustees the same shall be surrendered. Honors are open to the world. Indiana only excepted. George J. Parrot, Charles W. Neiswanger, George Graham Holloway, trustees.

Good Lenses at a Low Cost

The Guarantee of the Scientific Lens Company together with the low prices at which they are offering the lenses of the United States Optical Company in their two-page advertisement in this issue, will sell these instruments very quickly. Intended purchasers should send their orders in at once as the supply is limited. The desired lens will be reserved for you if you will mention this magazine in your letter. This is a rare opportunity to secure a really good lens for less than the cost of manufacture and the chance to profit by this sale should not be overlooked. The lenses will be sent on trial or can be ordered through your dealer, and there is a five per cent discount for cash with order. The Scientific Lens Company must have every confidence in the merits of these lenses or they would not make this offer which entails no risk on the part of the buyer should he be undecided as to the quality of these instruments.

American Agents for Dallmeyer, Ltd.

CAMERA CRAFT Dec. 10, 1906.
San Francisco.

Gentlemen: It gives us pleasure to state that we have appointed Taylor, Taylor & Hobson, Ltd., of 1135 Broadway, New York, our sole American agents for Dallmeyer Portrait lenses. Owing to our close touch with the head offices of this firm in England, we are now in a position to avoid the delay which may sometimes have arisen in the past, over the purchase of Dallmeyer lenses in America. Messrs. Taylor, Taylor & Hobson, Ltd., will carry a full line of our portrait lenses at New York. Every facility will therefore be available for handling the business promptly and efficiently.

J. H. DALLMEYER, Ltd.,
C. F. LAN-DAVIS, Secretary

Our Book Shelf

"Photography for Students of Physics and Chemistry"

This is the somewhat misleading title of a most excellent book by Louis Derr, Ph. D., M. A., S. B., Associate Professor of Physics in the Massachusetts Institute of Technology. The title is misleading only so much as it may convey the idea of a very technical compilation of optical and chemical information on the one hand and on the other fail to suggest the real truth of the matter, namely, that it is an eminently practical, clear, concise and instructive treatise for the amateur photographer who has advanced beyond the point of merely "pressing the button," and this despite the fact that it is intended for the technical student in the schools as well. The book is a most successful attempt to present a discussion of photographic processes, so far as their theory may be expressed in elementary form, in such a way that the ordinary photographic worker may secure a definite knowledge of the character and purpose of the various operations involved in the production of a photographic picture. The writer has sought to avoid the trivial details that hardly need recording in the elementary handbooks and at the same time avoid the discussion of disputed points and historical data. In other words, he has sought to fill that wide and somewhat empty middle ground between the good handbooks that are so common and the monograph which is often rather technical and always limited to some particular aspect of photography. The Macmillan Company, 66 Fifth avenue, New York. Cloth, $1.40 net.

The American Annual

The new volume for 1907 has reached our table since our brief advance notice in the last issue and proves to be a worthy successor to the excellent issues which have gone before. This issue is the twenty-first, and for that reason and on account of its wide popularity it seems almost superficial to go into details. The frontispiece is a photograph on developing paper, and a large number of the hundred full-page illustrations are printed in a colored ink. Hundreds of smaller illustrations adorn the pages and illustrate the text which is of the most instructive character. These articles are by our best photographic writers and seem to be their best efforts in that direction, as the pictures are the best work of our best known workers. Some three hundred and fifty pages are devoted to the book, exclusive of the advertising pages and the inserts in colored ink mentioned above. The volume can be secured of the leading dealers. Price in paper covers, 75 cents; cloth bound, $1.25, ordered direct from the sole sales agents, George Murphy, Inc., 57 East Ninth street, New York. Ordering by mail one must send postage; 17 cents extra for the paper cover and 23 cents for the cloth-bound edition.

Little Pilgrimages Among Bavarian Inns

The above is the title of a handsome volume of some three hundred and twenty-five pages in art cloth and gold, profusely illustrated with reproductions of photographs by the author, Frank Roy Fraprie. The book is uniform with "Little Pilgrimages Among English Inns" and others from the same publishers, L. C. Page & Co., New England Building, Boston, Mass., $2.00 each. This work of Mr. Fraprie's has all the charm of a series of personal letters, and with his keen appreciation of the quaintness of the country and its people and his entertaining style the book is given a charm that is as hard to describe as it is difficult to cease reading when a beginning has been made. One travels as it were in the company of the author and meets the same individuals and views the same scenes in all the reality of good photographic reproductions. While his own impressions are at all times entertaining, they are not presented with that finality which is so often

objectionable, but take their place in the narrative much as would the comments of a friend in whose company the journey is enjoyed. Mr. Fraprie is known to our readers by his contributions of pictures and articles to our pages, and his position as an artist with the camera requires no setting forth by us. While the book is not photographic, it is one that will interest, instruct and entertain our readers all the more as the work of one so deeply in love with the camera and its possibilities, and despite the charming humor and pleasing style, the history and character of the country and its people are incorporated almost without the knowledge of the reader.

"Little Folks" for November

This premier publication, edited by Charles Stuart and Ella Farmen Pratt, for the youngest readers, comes to us this month brimful of good things for the appreciative clientel to which it appeals so strongly. It is regular magazine size, a frontispiece in colors, and a generous supply of half-tone and line engravings assisting the carefully chosen reading matter, while the paper and press work is of the highest quality. As a factor in cultivating a love for wholesome reading in the smaller members of the family it can not be too highly valued. As a Christmas present to a child a year's subscription would be ideal. A sample copy will be sent on request by the publishers, S. E. Cassino, Salem, Mass.

In San Francisco

These are the days when the San Francisco Man-Who-Reads says strong and muscular words about certain correspondents and foreign editorial writers whose facts are based on his fancy. He reads of "The city that was," and says "Fudge!" and loses his temper when he finds San Francisco classed with Karnak or Nineveh. It's all mighty interesting reading—this twanging of the lyre on a one-tuned threnody for the lost city of the Golden Gate —but as history it's mostly rubbish. San Francisco today bears about the same proportionate, pulsing relation to Nineveh that a Russian bomb does to Yorick's skull. The big western metropolis by the Golden Gate, that lost somewhere near $400,000,000 worth of its property in its April disaster, is righting itself so rapidly and so gaily that rare old Phoenix bird must be pluming and proud of its youngest chick. Eleven million passengers carried on its street cars during July; forty-eight million dollars worth of real estate changing hands during the six months ending with June; bank clearings for August footing up one hundred and eighty-eight millions; clearings for one week in September $46,005,049, twenty-five per cent more than the corresponding week a year ago. These are just a few facts worth noting. No wonder the loyal citizen says "Skidoo!" to the calamity howler who discourses learnedly on earthquake cycles, or figures that San Francisco's ocean-carrying trade must be divided hereafter between Guaymas and Sitka. Nineveh, Gadzooks!—Charles S. Aiken, in Sunset Magazine for October.

California Headquarters in New York

Information has just been received at the headquarters of the California Promotion Committee, in San Francisco, of the details of the establishment of its Eastern Bureau in its new, permanent quarters at No. 9 East Twenty-third street, New York. This is at Madison Square, the great central point of New York, just across from the new office, being the famous Flatiron building, which is probably the best advertised building in the world.

It has been arranged to provide a place where visiting Californians may go to get all sorts of information, or to meet their friends. An information bureau has been established concerning New York and its environs so that all visiting Californians may get all necessary information.

There has been much complaint regarding the inability of visitors to New York to obtain information about the city, and the Eastern Bureau will try to remedy this so far as California visitors are concerned. All Californians are cordially invited by the California Promotion Committee to make use of the facilities of the Eastern Bureau. They will find a desirable place to rest, to meet their friends, to read their home papers and magazines, including "Camera Craft," which are kept on file, and are assured of a genuine California welcome every time they go.

CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

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CAMERA WANTS

Advertisements under this heading will be charged for at the rate of 50 cents each insertion for twenty-five words or less. Each additional word, two cents extra.

For Sale—At less than half list, one 4x5 Pony Premo No 7 new, with film pack, etc. Address T. J., care Camera Craft.

For Sale—Kodak supply and finishing business in center of best retail section of San Francisco; small capital required. Address L., care Camera Craft.

For Sale—Photo Studio, the best location on Broadway, Los Angeles. Well equipped. Must be sold. For terms address Howland & Co., 510 South Broadway, Los Angeles, Cal.

For Sale—One Premo Camera No. 4, 4x5 and one Premo Camera No. 6, 6½x8½, Planatograph lens, nearly new, no reasonable offer refused. Address H. J. Luttig, Franklin, Cal.

For Sale—5x7 double Anastigmat F6.8 Wollensak shutter, wide angle Anastigmat to fit above; $25.00. Wanted 5x7 Premo No. 7 or Century Grand with or without lens. R. Glasgow, Wilburton, I. T.

Wanted—Amateurs having cameras (not Kodaks), 4x5 or any size larger, can earn $5.00 per week by taking pictures for us at home. Send stamp for particulars. Oval Portrait Co., Caxton Bldg., Chicago, Ill.

For Sale—A gallery in town of 2,500 population; county seat; no opposition; many small towns to draw from. Full 8x10 outfit; cabinets $5.00 and up per dozen. Good reason for selling. For particulars write F. W. Lesmeister, Auburn, Cal.

For Sale—6½x8½ King View Camera, two double plate holders, extra 5x7 back, 5x7 Premo film pack adapter, 6½x8½ series V Zeiss wide angle lens, carrying case for camera, tripod, plate holders and lens. Best offer takes outfit or any part of it. Address Will H. Fouts, Dayton, Wash.

For Sale or Exchange.—Packard Bros. sketch ground 8x8 feet, with 6-foot floor cloth; light, sketchy effects for Platinum or Sepia. Perfect condition. Price $10. Also Scoville & Adams 8x10 View Camera 22 inch bellows, 2 double plate holders, canvas case, Voightlander lens and Duplex shutter. Take $50 or good wide right angle lens as part payment. Address R. X., care Camera Craft.

FOR SALE CHEAP—NEW STUDIO

The leading Studio in western city of 100,000 population; ground floor; built two years ago; big trade, well established; fine location; must sell by January 1st, as important financial interests call owner East; will sell for less than cost of fitting up. Address T. H. X., care of CAMERA CRAFT.

An Easy Way to Learn Carbon Printing

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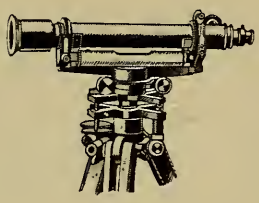

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The progressive amateur always desires to get away from the stereotyped way of doing things and to impress his individuality on everything he does. There is no greater field for the exercise of the artistic sense and ingenuity that in the compilation of an album of views, portraits, or a souvenir of some special occasion. More often than not the actual picture is contained in but a portion of the full original print and sometimes to properly balance a page requires a long narrow print or one round or oval in shape.

When mounting with paste the full sized print may be mounted on the usual thin album leaf by tipping the edges, but with the smaller prints trouble at once begins as none of the prints can be mounted in full contact without the leaf cockling, and tipping the edge of the small print usually means its coming off on the slightest provocation.

The remedy for this or any other mounting problem is Kodak Dry Mounting Tissue—any print of any shape or size may be mounted in full contact even on thin paper and will be absolutely flat—and, an important point, no souvenir hunting friend will be able to remove them from the album, as a print mounted with Kodak Dry Mounting Tissue stays mounted.

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Flashlight photography embraces a much larger field than placing a number of persons in a group—Hold Still—Touch off the flash powder—Woof!!!

As Eastman Flash Sheets burn considerably slower than flash light powders a softer, evener illumination is assured, avoiding the startled expression so often in evidence.

By making use of one or more flash sheets behind a screen of cheese cloth which may be held in any desired position, and the proper use of a simple white reflector, (a towel pinned to a lath will answer) any lighting may be easily made.

The Flash Sheets have this advantage over daylight, in that the volume and direction of the light may be absolutely controlled.

Many novel effects may be secured, such as fire place pictures by placing a flash sheet in the fire place, screening the flash so it will not reflect directly into the lens.

On camping trips, an excellent picture of the campers around the evening fire may be made by placing a couple of flash sheets just in front of the fire. Seat one of the group between the fire and the camera to screen the lens from the flash, this member of the group to ignite the flash—he will be rendered in outline only which will serve to heighten the night effect.

Striking window effects may be produced by placing the flash outside the window, just out of line with the lens, having the subject just inside the room looking out.

These are only a few suggestions for flash sheet work as the possibilities are unlimited and entail no apparatus beyond the flash sheets and a sheet of cardboard or tin to fasten them to.

Ask your dealer.

DOCTOR KODAK.

A recent number of a well-known publication contained an amusing article entitled "My Holiday with a Camera." This article brings home to the "run-down" man without a hobby the advantages and delights of the Kodak as an out-door companion.

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"Get out of doors and take a Camera with you," was the doctor's instructions. When the patient returned from his vacation perfectly recovered, he summed up his experience thus :—

" I will say this for that first camera experience of mine: it kept me walking about; it interested me and amused me; it kept my mind from work, and worry, and ennui, and built me up a new man."

The Kodak means more than recreation, there are other amusements that would keep one walking about and interested but there is no other form of recreation so universal in application.

Any where, any time, by night or day the Kodak furnishes an inexhaustable field of both recreation and instruction with the added advantage that the pictures made with the Kodak enable its possessor not only to live over many pleasant hours but to share them with others.

PERSONAL FINGERS.

The development of an exposed plate or film is for the sole purpose of transforming the latent image into a visible one in order that a print may be made from it. The quality of the visible image or negative will depend almost wholly upon the exposure to actinic light the plate has received.

When the amount of exposure is *known*, if it be either above or below normal, certain modifications of the developer may be made to secure proper contrasts, or certain restrainers or accelerators may be locally applied to the sensitive surface during development but *all such manipulation must be performed practically in the dark by the feeble glow of the dark-room lamp.*

Modifications of density may be made after development and fixation have been completed and with much greater certainty as *the operation is performed in full day light*, and after you have been able to determine by making a proof, the exact amount of modification necessary.

When the time of exposure is unknown, the developer cannot be prepared with certainty as to its suitability, and once the image has appeared no accelerator or restrainer added to the developer can alter the contrast. The logical method for the development of either over, under or normal exposures is time or tank development, this is made patent by the following extract from an article on "Developing Unknown Exposures" by F. J. Mortimer, the editor of *Photographic News* (London) in a recent number of that publication:

"The occasion sometimes arises for the production of negatives from plates that have been exposed, but a record of the exposures lost. The methodical amateur, unfortunately, is not in the majority among his class, and more often than not makes many exposures during his photographic outings that are not immediately entered in the 'exposure notebook' carried so religiously by both beginner and advanced worker.

Frequently, therefore, although the plates are known to have had a fleeting visit from actinic light, it happens that a remembrance of the subject is the only clue that is followed in the dark-room.

Many other occasions may also arise when the photographer is called upon to develop plates the exposures of which he is unacquainted with.

A universal panacea for the treatment of difficulties of this description has been suggested in the employment of time development. The many advantages of this method cannot be denied, but although there are a great number of photographers who like to turn out their negatives with the

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assistance of as many time, labor, and thought-saving devices as possible, there are as many more who delight in and prefer to have a personal finger in the pie, and use their own judgment—*good* or *bad*—when dealing with unknown exposures.

With unknown exposures, however, the personal element counts for little unless some definite plan is adopted for their treatment.

This treatment so far as the preliminary stages of development are concerned, can be summed up in the advice:—'dilute the developer.'

Every exposed plate must be either under-exposed, normally-exposed, or over-exposed. If it has been under-exposed a dilute developer will do no harm, although a considerable time will probably elapse before the first appearance of the image ; if normally-exposed a similar developer will give as good a negative as a strong solution, while if the plate has been over-exposed, the dilute developer becomes a necessity if the negative is to be saved.

For certainty of results and convenience, the only points to be considered, tank development is *the* method and the Kodak Tank Developer must produce the highest possible percentage of good results *independent of the skill or ability* of the person making use of same."

HIS ONLY ARGUMENT.

Anybody can purchase a few pounds of chemicals, copy a few formulæ from a photographic journal and set up in business as a manufacturer of photographic preparations.

He may or may not be a chemist, but in either event his knowledge is limited to the preparations he is putting up and he neither knows nor cares about the composition of the film, plates or paper with which his preparations are to be used.

Certain chemicals used in photography look alike whether pure or impure, and up to a certain point *act* alike and it takes more than a prescription clerk to determine their fitness for photographic use.

Immerse an exposed plate in Blank's Universal Developer and you can, without doubt, obtain a negative; but will that developer afford you all the brilliance and gradation the plate is capable of yielding?

Not possessing exact knowledge of the composition of the plate emulsion it is not possible for any outside manufacturer to prepare a developer exactly suited to such plate, and this holds good with all other preparations.

You may purchase Blanks Universal for less money than you can the developer put up by the plate or paper manufacturer as this is and can be his *only* selling argument. The preparations put up by the plate or paper manufacturer must be exactly adapted to his product and for his own salvation *must* be sold at the lowest possible price consistent with quality.

It is not economy to save five cents on a bottle of developer that will produce a dozen second-grade negatives.

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CAMERA CRAFT

San Francisco, California

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CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

VOL. XIII. SAN FRANCISCO, CALIFORNIA, DECEMBER, 1906. No. 6

Press Photography

By Fred G. Wright

(Staff Photographer "Detroit Times")

Mr. Wright, despite the fact that his work is justly popular with the press of his city, has only owned a Graflex camera about a year and has devoted his talent to newspaper illustrating for less than half that period. This, coupled with the fact that he is possibly the youngest press photographer in the country, being only twenty-three years of age, causes him to speak less authoritatively than he might otherwise. Only at our earnest solicitation he has consented to describe his work and methods.

PORTRAIT OF THE AUTHOR

Press photographers have little time to write articles telling of their work. Their time is so fully occupied and things come along so fast that details as to exposure, conditions and the like concerning work done but a few weeks before, are forgotten. Newspaper work to the uninitiated has all the glamor that the life of a circus man has to the small boy. It looks easy and interesting but when one is brought face to face with the actual work and has to endure the trials and tribulations that are sure to fall to his lot, the story is a different one. The work is done hurriedly at all times and as there is no choice as to conditions, the press photographer can only hope for success by bringing to bear upon work every available expediency which his knowledge and ingenuity may suggest.

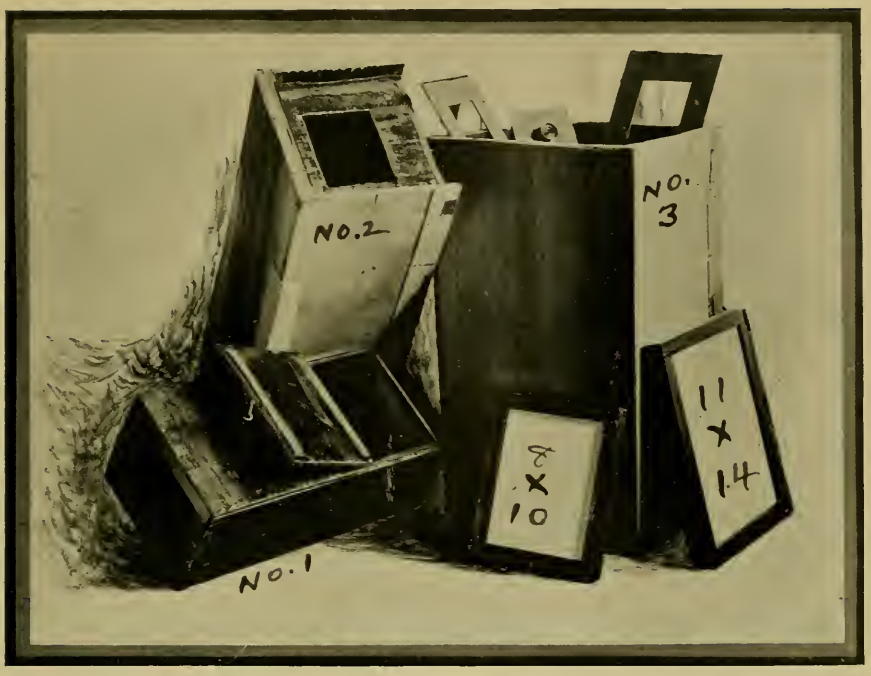
The man at the desk in the office of the modern daily at whose command we must produce pictures, as a rule has but the most superficial knowledge of photography. He knows that pictures can be taken at night by the aid of a flash. He knows that the camera will catch a racing automobile going at full speed. This being the case he can not see why a photograph of any-

thing at any time of the night or day is not perfectly photographed at his request. One of the pictures herewith, the one showing the people on the stage, is a recent example in point. I was sent to get a picture of this and reaching the hall found that a flash would not be allowed. Setting up my camera I observed that as a new character came upon the stage to be presented there was a period of quiet just before he came forward. Taking advantage of one of these waits I made an exposure of ten seconds with a Zeiss Unar lens working at f-5.5, full open on an 8x10 Seed Landscape Orthochromatic plate. All the lights were those on the stage and a small calcium light thrown on the figures from the balcony. The portraits herewith are every-day samples of work done at police headquarters by an ordinary high window starting about three feet from the floor and extending to the ceiling. As an accessory we have two eight-foot screens hinged together. One serves as a background and the other as a reflector. In making these portraits we generally work together, the three photographers on the dailies, setting our cameras up in a row and all exposing at the same time. The lighting is not always just what could be desired by the man at the most undesirable end of the row, but we get good contrasty negatives suitable for newspaper reproduction. The two women are shoplifters, the two negroes highwaymen who relieved a woman school teacher of a purse containing two hundred dollars. The man is a wife murderer now serving a life sentence, and the single portrait of a woman is that of a murderess awaiting trial for shooting another woman with a gun. The baby is one nine days old that was left on a doorstep near midnight, doped with whiskey and milk. It has since been adopted and has a good home. The wrecked building is the result of a cave-in of a hotel. I ran across this on a trip and secured the picture by climbing out on a narrow wall of brick. Workmen narrowly escaped death when the floor fell, and the contractor would not allow any reporters to enter the premises. My paper was the only one that got the details and the picture was a "scoop" although it does not possess much in the way of artistic merit. The picture of a yacht represents another "scoop" as it was concerned with a very important story involving some prominent people. The name had been painted out and with only a clue as to its whereabouts I found it with great difficulty and the picture was made about sunset on a cloudy winter day from a view point that involved climbing out on an icy ledge where a slip meant a bath in ice-cold water. A time exposure had to be given with the boat rocking constantly but the blur is not nearly so great as I expected to find it. The smaller one of the two auto pictures represents Barney Oldfield in his "Green Dragon" with solid iron rear wheels, passing Webb in the recent races here. The other is Oldfield and Coey racing. Oldfield has a cigar in his mouth in both pictures. These were made with a Tourist Graflex and Goerz Celor lens. I have neglected to include samples of my work done at the morgue and at funerals, as not of the most pleasing kind although before breakfast details at the morgue are quite common in the work of a press photographer. All of these negatives were rush work but with the Graflex camera and Ziess Unar or Goerz Celor lens the negatives

SOME TYPICAL NEWSPAPER WORK

are sharp and clear, and although they are printed from before the hypo is washed out and printed on glossy velox and reproduced in the same hurried manner, the result, even on the cheap grade of paper used for dailies, is not bad. A focal plane shutter is a necessity and in fact one would be foolish not to have such a shutter fitted when using such fast lenses, as the ordinary shutters would not allow one to use the full capacity of his instruments. These fast lenses make many kinds of work possible that would be out of the question with an ordinary outfit. Poor light and a late hour of the day do not deter the photographer who is equipped with good lenses and with the additional facility of a focal plane shutter, rapidly moving objects can be fully timed where a slower lens would result in failure. While the Graflex is all that could be desired when going out for certain definite work I believe an ideal outfit as a constant companion would be a 4x5 Goerz Anschutz camera fitted with a Celor lens of seven-inch focus, working at f-4.8, carrying either three extra plate holders or a roll holder for six exposure films; the last being most advisable if going far from a dark-room. With such an outfit one would have the minimum amount of weight and bulk with all the advantages of the high speed secured by a fast lens and focal plane shutter. There are always things turning up when one has left the Graflex at home or at the office on account of its weight and bulk. As I have said, my regular outfit consists of the 5x7 Graflex fitted with the Celor lens. For larger images such as races, ball players and other work of this kind where there is plenty of room I put on a Unar of twelve and a quarter inch focus. To do this I have to put on an extension box which I had made, as the bellows of the camera has not sufficient extension for a lens of so long focus.

To facilitate making prints from wet negatives and also to allow me to somewhat enlarge the image when desirable, I have rigged up three boxes, as shown in the illustration herewith. Of course they are not very pretty and do not display any great amount of skill in cabinet work, but they answer the purpose admirably. In their construction I used ordinary white wood that comes in boards three-eighths of an inch thick and about twelve inches wide. The lens that I use is a Ross wide angle of five inches focus, and as each worker will no doubt have one of a little different focal length I will simply give rough measurements and other workers can figure out the right length for their own lenses or else do as I did and make the boxes a little longer than necessary and then saw them off where the right length was found by trial. The pieces are both nailed and glued at the joints and in order that they be perfectly light tight, pieces of cardboard were glued along the outside joints. The inside of the boxes are blackened with any kind of dull black paint that is procurable, and this should be done before the pieces are nailed together or before nailing on the last side. The boxes are best made of such a size that the printing frame used to hold the paper will just fit inside, as shown in position in the No. 1 box where the door is raised. This door also admits of removing the lens and changing it to one of the other boxes as it is screwed in the central partition facing the



printing frame as it should. This middle partition is made to take the lens board and is supplied with a couple of wooden turn buttons to hold it in place. Two cleats are nailed inside the end so that the printing frames are held in position snug against the end of the box. For very thin negatives I use the regular grade of Velox in order to get contrast, and as the negatives are thin it does not take very long to print. With these thin negatives and regular Velox the sun is allowed to shine directly on the negative. For other negatives I use the special grades to save time. I use the largest stop in this lens, which is f-16, and get results on glossy Velox that can hardly be told from contact prints, they are so sharp and clear.

To return to the dimensions of the boxes: No. 1 is about twenty-two inches long and 9x10¾ in size, taking a 5x7 printing frame with the lens directly in the center. This gives me prints the same size as the negative without touching the wet negative other than in placing it in the kit which holds it in position at the opposite end from that which holds the printing frame containing the paper. No. 2 box, the longest one, is about thirty-two inches in length and 11¼x12½, and made the same as the first with the exception that the lens is about seven inches from the negative when in position and three times that distance from the paper in the printing frame. This gave me 8x10 enlargements from three and a half inch figures on my 5x7 negatives. This was used to give me good-sized images from the negatives made at the automobile races and like work. The other box, No. 3, will make 11x14 enlargements from 5x7 negatives, or will enlarge any portion of it or any smaller negative, four times. It is twenty-six inches long and 14½x17 in

size. The lens in this case is seven and a half inches from the negative and seventeen from the printing frame.

I believe this is about all the information that I can give. In newspaper work it is important to have the finished prints reach the office as early as possible. Another requisite of newspaper work is that the pictures should be large and fill the space as much as possible. If action is represented, the pictures should show all the action possible. If a figure is the theme that figure should stand out well as the feature of the picture. Good contrast is desired as the process or reproduction on the cheap paper used tends to soften the results. With these few hints in mind the average amateur can often pick up subjects that will prove most acceptable to the papers, and by rushing them to the office of the nearest city daily, show his appreciation of what is wanted and not only secure payment for the pictures sent, if of sufficient news value, but secure commissions for future work when something takes place in his neighborhood and it is not convenient for the paper to send their own photographer. Pictures sent in this way should be accompanied by a brief description of the happening portrayed, with the address of the photographer in case the paper should care to wire or phone for further particulars. As a rule they will have some correspondent in the locality whom they can reach, but this is not always the case.

ON THE RIVER ARNO NEAR FLORENCE, ITALY By E. SHELDON PENNOYER

Exposure in Sunlight

By Frank Morris Steadman

"Home Portraiture" by the same author and published by the Eastman Kodak Company. is a book that would be of the greatest assistance to anyone wishing to try Mr. Steadman's method. It explains very thoroughly the method of taking the Solio time of the light and also how to count time in exact seconds. It further explains the application of the Solio time method to portraiture and interior work. The book can be secured of any dealer or will be sent by the publishers on receipt of the price; twenty-five cents, paper covers and seventy-five cents in red leather with hinged perforated flap at the corner for the testing of the light according to Mr. Steadman's method.

I am convinced that the major portion of the good suggestions constantly being made by photographic writers receives but scant attention by the readers of our photographic magazines. They will, these same readers, rarely give the good advice the benefit of a trial. Of course some suggestions as to methods, are along lines in which the particular reader may not be interested, but when this is not the case and the advice may strike the reader as being worthy of trial, the matter is laid aside with the magazine and procrastination does the rest. There is, however, such a universal interest attached to the subject of sunlight exposures by those who have passed the snap-shot stage of photography, that I shall hope some of "Camera Craft" readers may find pleasure and profit in putting into practice the simple method of estimating such exposures which I shall outline and explain in this article.

On a clear day, the sun at a height of thirty degrees above the horizon, a piece of Solio paper will show the first perceptible tint in one-fourth of a second. When the sun is ninety degrees above the horizon, or directly overhead, as is often the case in the torrid zone, the time required to secure the tint is one-eighth of a second. This being the case, it will be practical to divide the dome of the sky into zones of intensity, the two most intense of which will be the ones from forty-five to ninety degrees, and from twenty-two and one-half to forty-five degrees, corresponding to one-eighth and one-fourth second Solio times respectively.

To determine these intensities it is only necessary for one to notice the length of his own shadow as cast by the sun. If the shadow be equal in length to the height of the person, or shorter, the Solio time of the light is one-eighth of a second, for the reason that the sun is forty-five degrees or higher in the sky. If ones shadow be from one to two and one-half times his height, the sun will be somewhere between twenty-two and one-half and forty-five degrees above the horizon, and the Solio time will be one-fourth second. The third zone will, of course, be one calling for a Solio time of one-half second, and this can be conveniently located between eleven and one-fourth and twenty-two and one-half degrees of altitude of the sun. With the sun in this zone, ones shadow will be from two and one-half to six times ones height. If the sun is lower than this third zone the intensity of the light should be tested by the Solio method, as atmospheric conditions, that are more or less local, influence the actinic value of the light when the sun is so

low, and its light forced to penetrate the lower stratas for a greater distance. This securing the Solio time, I might explain for the benefit of new readers, is simplicity itself. A few strips of the paper in a black or non-actinic envelope and a small hole in the corner of a memorandum book cover is all that is required. In the shade of your body quickly place one end of a strip under the hole, covering the apperture with a coin. Expose directly to the sun by removing and replacing the coin for what is thought to be about the right time, say eight seconds. If the tint is not perceptible, shift the strip along and try a new spot for

PHOTOGRAPHS By HON. LUIS B. VALDES, MORELIA, MICH., MEXICO
(These pictures were wrongly credited to Jesus Villalpando in our September issue)

double the time or sixteen seconds, and so on, by doubling the time, until the faintest visible tint is secured. If in eight seconds the tint becomes too plainly visible, move the slip and give four, then two and again one second, each time on a fresh portion of the strip until the faintest visible tint is secured. For convenience use this geometric scale, one, two, four, eight, sixteen and the like, in making the tests; making the exposure in all cases directly against the sun. The corner of the note book should of course be raised in examining the spots in the shade of the body. The time required to produce the faintest discernible spot indicates the Solio time of the light, the Solio time being the time required to produce that spot in that particular light.

We have seen that the matter of sunlight exposures on a clear day may be fully covered by the three intervals of one-eighth, one-fourth and one-half seconds, except when the sun is quite near the horizon, and these intervals may be easily determined by noting the length of ones shadow. In the "Solio time" method of timing exposures, the Solio time is the exposure time if the speed diaphragm for the particular subject is used in making the exposure. Our Solio time for these three zones in sunlight exposures having been determined as one-eighth, one-fourth and one-half, it is only necessary to know the diaphragm speed for the subject. These speed diaphragms, using any of the ordinary fast films or plates such as Cramer Banner X, Eastman film, Hammer extra fast, Seed 26X, and the like, is as follows:

THE PET OF THE FAMILY
By F. M. STEADMAN

Bird's-eye views	128
White objects in middle distance	128
Average or dark objects in middle distance	64
White objects in foreground	64
Average objects in foreground	32
Dark objects in foreground	16

To still further simplify this explanation we will suppose an ordinary case. The camera is set up before a view with objects of average color in the foreground; the speed diaphragm of such a subject being thirty-two. Our shadow being between one and two and one-half times our height, the Solio time of the light is one-fourth second, and that is the exposure with diaphragm thirty-two. To give that exposure, place the pointer on the shutter at "B," and press and release the bulb as you say the word "quar—ter" at ordinary speaking speed. If the shadow be just ones height or less, then the Solio time, and of course the exposure with that diaphragm will be one-eighth second, but one can make it one-fourth second by simply using the next smaller diaphragm in making the exposure.

For another example: Suppose that our shadow is about four times our height. Then the Solio time, and likewise the exposure, will be one-half second. And suppose we are photographing a scene with some dark object

AN UNSTUDIED POSE By F. M. STEADMAN

in the foreground, such as a team of dark horses or a mass of green foliage; the speed diaphragm is sixteen and the exposure one-half second with that diaphragm. If it is desired to use a larger opening it is only necessary to halve the exposure for each diaphragm opened or double it for each one closed. I might add that ordinary mixed groups, out of doors, should be classed as average objects in foreground, speed diaphragm thirty-two.

A few words as to the logic of this method of determining exposures as compared to that of exposure tables may not be out of place. Take, for example, a case where ones shadow is four times his height. The fact that the sun is at a certain height above the horizon is the only physical condition involved, so far as the intensity of the light and the work of exposure tables is concerned. Now, there would be no difference in the conditions should one be in Norway at noon in June, in New York at 8:30 a. m. in March, or in Mexico at 7:30 a. m., at almost any time of the year. One can see that exposure tables are but a series of evolutionary convulsions. As soon as the photographer realizes that the figures they give are based on the height of the sun above the horizon at the particular latitude, season and hour, they can be dropped entirely, as the height of the sun can be ascertained much more simply and directly and with perfect freedom from calculation in all parts of the world, either north or south of the equator, wherever the workers might happen to be, by simply noting the length of ones shadow and basing their exposures on these intensities of one-eighth, one-fourth and one-half seconds in connection with the speed diaphragms for the various

classes of subjects. Doing this, the matter of sunlight exposures need no longer be a difficult matter for the worker.

Should one consider the plate that he is using to be twice as fast as the ones mentioned, he has only to take the next smaller diaphragm in each case as the correct speed diaphragm of the subject. If the plate be of half the speed, take the next larger one. This method that I have outlined is based on the uniform system or U. S. stop markings. Should the diaphragms or stops one is using be marked with some other system, he has but to consult a table of comparative stop values to ascertain the relation they bear to the U. S. notation.

Trees

By W. Rob Whyte

With Illustrations by the Author

"Tongues in trees, books in the running brooks,
Sermons in stones, and good in everything."

A twenty years' sojourn in the land of the Southern Cross is surely sufficient to engender in the lover of Nature a special affection for the trees. A vandering of more than a decade in these forests of sombre evergreen, where the tints, unlike the changing hues of our northern clime, are ever the same deep shade, should be a fit training to an appreciation of their limitless varieties

LIVE OAK NATURE'S ARCHWAY

DOWN BY THE POOL

of form and texture. It has since been a great sorrow that, during these wanderings, the opportunity for none but a mental record was afforded me of the glorious pictures of tree life that I can now recall only for my own personal gratification. Truly, the camera is a sign of this altruistic age, by which we can give to others a glimpse of the scenes of our own enjoyment.

The preservation of our glorious giant trees, and the great interest taken by all civilized nations in the conservation of their forests, is another instance of this same altruism. Not for ourselves can we plant forests, but for the generations to follow after. And the very trees themselves seem imbued with this spirit of giving without hope of reward. The spreading shade of the giant oak may be enjoyed for ages by the beasts of the field and by man. The birds build in the branches while the cattle rest contented in the protecting shadow of its mighty limbs. The eye of the artist recognizes the poetry of its form and color, and gathers inspiration for a masterpiece. The camerist delights in its lights and tones and outlines, and makes it his own in a picture that rivals the painter's art. And from none of these has the tree had aught in return. And then, at last, it gives up its very life to make a home to shelter the man's wife and little ones. And so the tree has the gift of tongues; it speaks to each of us in our own language; to the beasts and the birds, to the lover and the poet, to the artist of brush or camera, and none the less to the lumberman with his greedy axe.

UNDER THE REDWOODS

It is no wonder then that the faithful photographer takes an especial delight in the trees. A landscape without trees is a cold and dreary affair, in which we miss their sheltering spirit even as we may long for their material protection on a bleak mountain side. In a picture, as so often in our daily existence, the spirit is the life; and how many, many pictures we have taken, even of the inspiring trees, that seem, when we have completed them, to have lost their spirit.

A glorious view of landscape and trees appears before you; it is a perfect inspiration; and, with glistening eyes and hope in your heart, you open your camera. You develop the negative, and it disappoints you. It is not what you expected; it seems to have lost the spirit which first gave you hope of an artistic picture. Do not throw it away

A PROTECTING ARM

A MISTY MORNING

in disgust, but make several prints from it, of different lengths of exposure, and put them aside. Look at them occasionally. The mind works in cycles, and you cannot expect to be in the same mood in the dark room as you were while roaming through the forest. But wait, and look at your picture in your restful moments, and in all likelihood you will come round to the original idea that at first inspired you. Then, and not till then, will you know exactly how to print from that negative.

Are these all wasted words in a practical magazine? I trust not. Can we not sometimes get away from the jerky rattle and clank of the factory, and listen to the wind in the trees? It may be only wind. But what more is the thrilling voice of the gifted orator? It is not what it merely is—it is what is really means, that is of vital importance. And the breath of the trees has wooed many a weary soul back to peace that the drugs of the doctors had failed to heal.

THE DRY SEASON By W. ROB. WHYTE

"Japine" Sepia Platinotype

By Charles S. Ogilvie

We have long wished for a platinum paper, particularly a sepia one, during the last few years, that would give in the finished and dried print that pleasing effect that one sees in the wet print as it lies in the washing water, something akin to the half-glossy effect secured in sepia carbon. The only adverse criticism that I have ever heard voiced against platinum being to the effect that the shadows, the deepest ones, failed to show the same effect of color as was shown by the lighter portions of the print. This has led many to adopt the plan of applying an encaustic paste or lustre varnish to such portions of a picture on platinum paper. Unsatisfactory as any such method must naturally be, it claimed many followers, if the English publications were to be credited. Finding a report of the 1906 convention at Southampton, England, made very favorable mention of the new "Japine" sepia platinotype paper, I was more than pleased to have an opportunity of testing its merits. Finding it satisfactory, and being greatly pleased with the results obtainable, I am prompted to give an account of my experiments for the benefit of the readers of this magazine.

To begin with, one must of course use the same care to see that the paper is kept in a calcium storage tube to avoid danger from dampness, although the manufacturers advise that its damp resisting powers are ten times greater than that of ordinary platinum paper. My own success with the sample used, working it as I did during a particular damp period of atmospheric condition when the heavy fogs gave the streets the appearance of an after-shower effect whenever the sun failed to dispel the dampness, assures me that they have just claims in this direction. Another precaution that must be observed is to avoid bending the paper sharply, as the coating of this new form of platinum paper is more in the nature of an emulsion and cracks may result. These are not precautions that are specially required, but are mentioned only in order that the novice may have no complaint to lay at my door. The prints can be dried between blotter as one is accustomed to doing, but owing to the nature of the coating there is a slightly greater inclination on the part of the prints to curl. For this reason they are best mounted by applying any good tenacious mountant over their entire backs or one may follow an alternative method, though similar, and mount a number of the prints on white paper about the thickness of ordinary platinotype paper, trimming them with this backing paper, the next morning. The paper is best used attached to a stretcher such as artists use for their canvas, although my own sheets were first wetted and then pasted down at the edges onto a drawing board and allowed to dry. These sheets were then covered with prints, given a coating of good heavy, unboiled starch paste that had been strained through muslin, and placed aside to dry slowly. If stretchers are used, it is best to put the prints on the under or inside of the frame. This allows the frame to act as a protection during the drying.

Should the prints curl through being allowed to dry other than under pressure between blotters or mounted as advised, they can be flattened by again placing in water. From the water the process is the same as ordinarily; they are placed face down on a sheet of clean glass and the water pressed out with a towel or squeegee and the paste applied to them in order as they are removed to the cards or the stretched sheet of backing paper. The manufacturers advise that where the air is extremely dry as in some high altitudes, a glycerine bath should be used, but this slightly decreases the brilliancy of the results, although prints so treated are still very effective. Formula for this bath is given on the sheet of instructions.

Negatives of ordinary density are best suited to this new paper, in fact I was agreeably surprised to find that my own negatives which incline somewhat more to softness than to hardness, were admirably adapted. Despite this fact, some rather harsh negatives gave most excellent results that seemed very satisfactory until compared with prints from softer ones. This was evidently due to the fact that the shadows retained in the finished print the rich and lustrous tone that robbed them of their ordinary objectionable appearance.

My first few trials were developed in a solution of the ordinary sepia crystals of the manufacturer, a half-pound package being dissolved in thirty-two ounces of hot distilled water, using it at a temperature of one hundred and sixty degrees. This I found later produced warmer tones than did the regular "Japine" developer, but the prints had not the same rich depth of color in the shadows. The depth of printing was found to be the same I was agreeably surprised to find that my own negatives which incline somewhat more to softness than to hardness, were admirably adapted. Despite this for the paper regardless of the developer used and practically the same as that for the ordinary sepia paper; in other words, printing was carried on until detail was seen in all except the highest lights.

The special "Japine" developer is undoubtedly the right solution to employ. It is made by dissolving a package of the salt in thirty-two ounces of hot distilled water. Pure water must be used and iron or defective enamelware dishes avoided. When the solution is completed and it has become cool, one should add eight to ten ounces of glycerine, being sure that it is free from acid, and after thoroughly mixing, strain through muslin. The mixed developer must not be exposed to strong daylight if one desires to use it repeatedly and by employing a good deep dish of the bath, danger of abrading the surface of the prints by rubbing on the bottom of the tray, is avoided.

The solution may be used cold, requiring longer to develop, about four minutes, but the temperature should not be permitted to fall below eighty degrees. Using the developer warm or at a temperature between one hundred and one hundred and twenty gives the best results and development requires about one-half the time necessary with the cold developer. If several prints are developed in one tray at the same time, one will, of course, change

SWEEPING THE ROAD—GERMANY By F. E. MONTEVERDE

them over a few times in order that they may not become banked together and unequal action result. From the developer the prints should be at once immersed in an acid bath composed of one part of hydrochloric acid in sixty parts of water. Five minutes in the first bath, ten in the second, fifteen in the third and in the last or fourth bath not the slightest tinge of color should be communicated to the bath by the print. Four or five changes of washing water at intervals of five minutes suffice as washing or running water for ten minutes if prints are kept well separated.

One can see from this that the working of the new paper involves no difficulty, in fact, simplicity characterizes the whole process. The paper keeps well, has a latitude in printing double that of ordinary platinum paper and a trial will convince one of its wonderful beauty of results. The tone is a true sepia in both the matt and glazed surfaces, but of course the latter displays the most brilliancy. The prints which I secured have pleased me greatly and showing them to experts they have been classed as fine carbons and much admired. It is certainy destined to become one of the most popular printing mediums, and those desirous of keeping in touch with the best should give it a trial at once.

AN ARCHITECTURAL STUDY
By GEO. F. HOLMAN
O. C. C. 12th Annual Exhibit

A PAIR OF MALLARDS
By H. J. THORNE
First Prize Still Life,
O. C. C. 12th Annual Exhibit

The Oregon Camera Club's Twelfth Annual Exhibition

Portland Museum of Art, November 26th to December 1st, 1906

By Dana Sleeth

Despite the best efforts of several members of the Club to secure copies of all of the prize winning pictures suitable for reproduction herewith, it was impossible to carry out the undertaking for the reason that enlarged negatives in pigment processes were so popular with many of the best workers. Some of these were in colors that would not admit of satisfactory reproductions and in some cases where solio prints were made for our use it was found that they would only give good blocks by being greatly reduced.

The annual exhibit of the Oregon Camera Club that was held in the Portland Art Museum Thanksgiving week, was the most successful in the point of attendance, publicity, number of prints hung, and general character of work exhibited, that the club has yet held. On the opening night over eight hundred visited the display, and through the week the attendance averaged

A PLEASANT EXPOSURE — FRED J. ROGERS
First Prize Genre, O. C. C. 12th Annual Exhibit

much higher than in former years. The press of the city was unusually generous with notices and reviews, and this yearly exhibition seems to have taken a permanent place among the art events of the city of Portland.

The entries this year were more varied than ever before, chiefly because the Exhibit Committee offered eighteen prizes in nine classes, instead of the

AN OCEAN WAVE By H. J. THORNE
Second Prize Marine, O. C. C. 12th Annual Exhibition

three cups usually given. In several classes, such as genre, portrait, landscape and marine, there were from six to a dozen contestants, the offerings in the genre class being more liberal than ever before. The classes for which awards were given were: Portrait, genre, seascape, still-life, landscape, cloud, flower, river and harbor, and animal. The awards of the judges were: Portraits—B. C. Lewis, first; H. J. Thorne, second. Genre—Fred J. Rogers, first; J. A. Haran, second. Seascape—Geo. F. Holman, first; H. J. Thorne, second. Animal—J. L. Braden, first; Mrs. Fitzgerald, second. Flower—H. E. Powell, first and second. Still-life—H. J. Thorne, first; Dana Sleeth, second. River and Harbor—Fred McClure, first; Jas. V. Reid, second. Landscape—J. A. Haran, first; A. G. Myers, second. Cloud—A. G. Myers, first; I. N. Lipman, second.

The decisions of the judges on the whole were unusually satisfactory, and for the most part were evidently based on an artist's ideals rather than those of the technical photographer. Work that had feeling and that expressed individuality was given the preference rather than that which was perhaps more perfect in execution, but that had nothing to separate it from any other similar print of its class. The awarding of the prizes on this basis resulted in the exhibiting members forming new ideas as to the ultimate mission of pictorial photography, and the future work of these members will no doubt show the impulse given this season to be a most beneficial one.

The members entering the largest number of prints were: J. A. Haran, Fred McClure, H. J. Thorne, Geo. F. Holman and H. Claussenius, Jr., who

PROFILE PORTRAIT
By DAN ELLERY
O. C. C. 12th Annual Exhibit

contested for the Judd cup. Alfred G. Myers, Dana Sleeth, J. L. Braden, H. E. Powell and Don Ellery also made large displays. The largest individual exhibit was offered by Dana Sleeth, who exhibited sixteen carbon and gum prints. Several of the workers who have in time past been the mainstay of these annual exhibitions were unable, through press of other duties, to exhibit, and some of the older workers who did exhibit, were likewise unable for the same reason, to enter more than one or two prints. Several of the old guard who went in for the Judd cup had not been able to secure the range of subject, or display the real mastery of their favorite processes as they could have done had demands upon their time been less pressing.

George F. Holman secured the Judd cup which was given for the best in-

SNOW SCENE
O. C. C. 12th Annual Exhibit

By J. J. TYRELL

dividual exhibit. His marine, portrait and architectural prints were the prizes of his collection and fully up to any work he has ever shown. Mr. Holman also exhibited a flower study in colors by the carbon process, which was unique. The exhibit of Mr. McClure was notable for containing the print pronounced by the judges the best on the walls. This was a harbor view abroad, the colored support giving the twilight glow that made the scene so effective. His portrait, "An Old-fashioned Girl," was also one of the best things in the exhibit. A unique print of Mr. McClure's was a green carbon showing Mt. Hood by moonlight. Mr. Haran offered an unusually good Indian picture; the prize landscape and an excellent genre. Many regarded his small marine one of the best things in the exhibit, as it certainly was one of the most effective. The

FRAU KARL DRUSCHKI
By H. E. POWELL
First Prize Flower Study
O. C. C. 12th Annual Exhibit

THE AFTERGLOW—VENICE
F. H. McCLURE
Adjudged Best Picture
O. C C. 12th Annual Exhibit

exhibit by Mr. Thorne was pronounced by the critics as one of the most evenly balanced, or with fewer prints below grade, than any in the exhibition. His still-life of Mallard ducks was a realistic bit of fine workmanship, and his marine was awarded second place by the judges. In addition he had a fine landscape and two good portraits, one of which last received second place in its class. Mr. Claussenius showed an excellent marine and a frame of animal studies that deserved special mention. The general character of his exhibit was up to his usual high average. A trio of novel portraits was offered by Mr. Ellery, who for years has made a specialty of heads and figure studies, and who chose for his medium this year Eastman's Sepia, the resulting broad, sketchy prints suiting his subjects admirably.

FIRST PRIZE PORTRAIT By BERT C. LEWIS
O. C. C. 12th Annual Exhibit

Though it was the first exhibit in which Mr. Reid had entered straight photographic prints, he carried off second honors in the river and harbor class, and had he not been competing against the best print in the exhibit he would have taken first. His river and harbor scene was a gum print in two colors that was a distinct success, and this medium is assured much more popularity with several of the exhibition workers, now that it has been successfully introduced. Mr. Powell centralized his energies on flower studies, as during the past year he has mastered the problems of lighting and arrangement which makes this work so difficult. He carried away first and second prizes with his studies o roses, despite the fact that there was competition in the field.

Mr. Myers is another of the new members who did things at this, his first exhibition. He secured first prize in the cloud class and second in landscape, all his prints being of outdoor scenes expressed in carbon and bromide. First in genre was awarded Mr. Rogers, a new member who captivated judges and critics with two child studies. The winning picture was a large bromide, "A Pleasant Exposure," that was the best thing in the display as a study of unconscious childhood. Competition in this class was most keen, and that Mr. Rogers, who entered but two prints, should secure the award against the field of experienced exhibitors and convince all his rivals that he deserved the award, speaks loudly enough for his future work. I. N. Lipman offered

but two prints—both were among the best shown. His fireside study of a meditating maid was uncommonly good, and his landscape secured the second cloud award. Herbert Husack also showed for the first time. His "The Mendicant" and "Looking Unpleasant," both genre pictures, convinced the older workers that new hands were ready to take up what old hands had laid aside, with nothing lost by the change. Bert C. Lewis secured first prize in the portrait class, and his work is another example of the new member achieving success against the work of experienced competition. Next year Mr. Lewis' work will be still more to the fore, he expecting to materially enlarge his field before another exhibition.

Mrs. Joseph McClelland, one of the few experienced exhibition workers among the women of the club, showed two prints of the best type, these being "The Beach Road" and "'Tis an Old Tale and Often Told." Kathryn E. Cronin showed two prints; her "Sunny Boy" was not excelled by any child portrait study in the exhibit, and again a new worker made older hands take notice. Her medium was but bromide, but the subject was strong enough to overcome any disadvantage that might be charged to that medium when in competition with carbon and gum.

J. J. Tyrrell showed five landscapes, one of them a snow scene that portrayed real snow instead of white paper, and marsh landscapes with trees that had atmosphere, distance and good composition. Mr. Tyrrell is an old worker, his hobby being landscapes, and at that work he excels. J. L. Braden exhibited six prints. "Tommie" secured first prize in the animal class, and his marine was one of the best things of that class. The only drawback was that it was

THE MASK AND THE CHEST — By DANA SLEETH
O. C. C. 12th Annual Exhibit

AFTER THE SHOWER — By J. N. LIPMAN
O. C. C. 12th Annual Exhibit

not in carbon, which would have given the full values of the fine negative. His puppy study was, in the opinion of many, even a better animal study than the one on which he secured an award. Arthur A. Allen exhibited three prints, his best being "Happy Haymakers," which was good enough for a much more experienced exhibition worker. John Gill had six prints entered. "The List of Subscribers," a Chinese street scene, was perhaps the best, though his "Winter Woods" was a delightful snow study.

S. H. Brainard entered three landscapes, among them a fine snow scene. His "Duck Ranch" was an excellent example of straight photography, and his "Twilight" was as good as a bromide landscape can well be. S. A. Thrall exhibited four prints and the four were all examples of good work. "Where Are You?" and "Seeking Mischief" were especially pleasing and most interesting examples of that type of photography that necessitates spending half a day to get a picture but only an hour to finish the resulting print. In short, it was that aforementioned "straight" photography, and very good. Mrs. J. J. Fitzgerald entered but two prints, and secured an award on her chick study, "The Motherless Brood." Those who saw her exhibit were sorry that she could not have devoted more time to increasing her list of subjects. D. H. Brown entered this, his first exhibition, with five big bromides which were of good tone and composition, and showed possibilities for much better work when more advanced processes are mastered.

Other exhibitors whose work should have mention were Hugo B. and Milton P. Goldsmith, L. C. Hendrichsen, C. H. Hoeg, Sam'l C. Kerr, Sim R. Winch, C. R. Zehntbauer, A. Zinsley and Geo. S. Shepherd.

Photographing an Eclipse of the Moon

By Sanford Robinson, Ph. B.

The amateur photographer starts out as an *amateur-amateur.* He takes innumerable pictures or tries to, buys everything that is recommended to him by the dealers, tries a new developer every few days, and by dear experience is taught after a time, two things—the first: what not to buy, and the second: when *not* to take a picture. He is then an Amateur. He develops an artistic taste probably and gets interested in all the various printing methods. After a period of that sort of thing, he arrives at the third and last stage. Like Alexander, he has no more worlds to conquer, and so becoming weary of the old subjects, he lays aside the camera and only brings it out when he can find something new or original, which he seldom does. Perhaps not all amateurs follow this course, but many do as I know from personal knowledge, and I am one of them. Vanity, vanity, all is vanity, saith the preacher, and there is nothing new under the sun. But happening to look at the Nautical Almanac one day, I found that there was something new under the *moon;* a total eclipse to wit. If not new, this was something unusual and I began to think of my camera, for here was a chance to get some amusement from that disused implement and I set about my preparations for the event.

I first translated Greenwich mean time (for ordinary purposes, this is the meanest time I know of) into ordinary, reliable, old-fashioned standard mountain time; made a table showing the times at which I would make the exposures, so arranged as to give equal intervals between them; and then began the mechanical part of my preparations.

I am the possessor of a Beck, R. R., 4x5 lens, size, of seven inch focus which in itself would give an image of the moon about as large as the head of a large pin. In addition however, I had a telephoto attachment made especially for my Beck lens, by the great lens makers, Messrs Bausch & Lomb. This has a "magnification" of from two and one-half to three and one-half diameters, which give areas of six and one-fourth to twelve and one-fourth times the original image, so that I could get an image of the moon if I wished, twelve and one-fourth times the size of that obtained by the Beck lens alone. For enlarging purposes, I made a few years ago, a camera capable of using any plate from the smallest size up to 11x14 inches. I was therefore provided with all the requisites for obtaining the image of the moon at its various stages during the eclipse. The accompanying view shows the camera, or rather I should say, one half of it, it being made in two parts which can be combined or used separately, in the former case having a "pull" of nearly six feet. It was only necessary, with my telephoto attachment, to use the larger half, the question being how to mount it in order to support it firmly in place and yet allow of its being turned in any direction. Observation showed that the moon, when on the meridian, would be very near the zenith, so that the camera would have to be pointed very nearly vertically. It must also, at the beginning of the eclipse, have to be directed towards the south-east and at the end towards the south-west. A description of the method adopted may prove interesting to the

readers of CAMERA CRAFT, so I will proceed to give it. The camera, with its base board, is rather heavy and required a strong frame. This I made of 2x4 scantling in the form of a rectangle some eight or nine feet long by two feet wide, bracing it at the corners. My house faces to the south, so I proceeded to mount it on the front veranda, or rather on the steps leading to it, as I found if the frame were not set well out, the view of the moon when near the meridian would be intercepted by the eaves of the roof. The lower end of the frame I pivoted into a block of wood fastened to one of the steps, the upper cross to the roof. This enabled me to get a clear view. The camera was made to turn on a horizontal axis between the vertical posts, this being a half inch iron bolt. The vertical frame when in place could be turned from east to west, and the camera raised from a vertical position downward to a similar one pointing upward. Having these two motions, it is easy to see that I had a complete command of the situation, being able to direct the lens to any point in the heavens from east to west, and from the ecliptic to the south pole the camera was maintained in position by a rope passing over a pully, its own weight holding it firmly in any position; the rope being tied to a cleat on one of the posts of the frame. The picture of the apparatus herewith given will show the arrangement more clearly than it can be described. I used 4x5 rapid plates (Seed) using the ground glass for focusing for the first exposure, and after that for centering the moon on the plate, immediately thereafter substituting the plate holder and making exposure at once.

THE CAMERA AS USED

I had intended to make some exposures the night before the eclipse, on the then very nearly full moon, in order to get at the proper duration of exposure, but clouds prevented me from doing this, so about an hour before the beginning of the eclipse, I made an exposure on the full moon, giving at duration of two seconds, this time being a guess. On developing the image I found I had the man in the moon, or rather I believe it is *now* a girl and a dog (you can see them in viewNo. 1.) or as some maintain, seas. At any rate I appeared to have the details or shadings, and I therefore assumed two seconds to be a

proper exposure, there being in evidence no blurring of the image due to the moon's proper motion. I would have used this time for all the exposures, but in the latter part of the eclipse, clouds began to form and drift across the sky, sometimes obscuring the moon entirely and again covering it with a haze. I had therefore to watch my chance, and succeeded in getting the number of views I originally intended to take, but I had to depart from the times I had set and also to increase the duration of exposure in some cases.

Including No. 1, the full moon before the commencement of the eclipse, and No. 13, the same after the end of it, there are thirteen views, eleven of which were taken during the time the moon was in the earth's shadow, although I ought, I suppose, to exclude No. 7, which was taken during totality. The moon at that time showed as a dull red disk, too faint to make an impression on the plate except with prolonged exposure, and that would have resulted in a blurring of the image. *Theoretically,* however, there ought to be no visible moon at totality, so we may consider No. 7 as a proper picture to include in the list. (I might mention here, that the inscription on the black disk, No. 7, was not obtained with the camera, but was put on by hand after mounting. This to avoid any misunderstanding. I might also mention as a solemn fact, that I was asked by a man over fifty years old, if I took the picture by flash light. If this is not believed, I can furnish the name of the individual, privately, on application. It was really too bad, but a regard for truth compelled me to inform him that no flash light had yet been invented sufficiently powerful to send its rays two hundred and forty thousand miles and back, although it was hoped that such a light would soon be perfected when it was the intention of the scientists to take a picture of the full moon and then by enlargement of portions of the picture, settle the question of its inhabitability.

After No. 1, the prints were underexposed slightly (they were made on Velox, by lamplight) as it was only desired to show the *shape* of the moon's disk with as much contrast against the black sky as possible, so only sufficient exposure to the light was given and the development carried only to a density that would give a fairly black sky. I should have mentioned that no diaphragm was used in the Beck lens during the exposures.

The table attached shows the time at which each exposure was made and the duration of exposure, referring to the numbered prints.

I do not know what size the editor will give to my moons. I hope he will make them the exact size of the originals, but for fear he may reduce them I think it well to give the diameter of the image of the full moon. I find by careful measurement that it is exactly one quarter of an inch, and if we divide that by three and one-half we find the theoretical diameter of the small full moon, No. 13, to be one fourteenth of an inch. I make it by measurement one fifteenth, but it is difficult to measure it accurately, and one fourteenth ought to be correct. We thus find that a seven-inch focus lens will make an image of the full moon, one fourteenth of an inch in diameter. I had the curiosity to see how near to this I could come by calculating the diameter of the image by means of similar triangles, taking the average distance of the moon from the earth and its diameter, as dimensions of one triangle and the equivalent

focus of the lens (seven inches) as one of the dimensions of the other, there being required the diameter of the image. As we have two thousand, one hundred and sixty two miles as the diameter and two hundred and thirty-eight thousand, eight hundred and fifty-five miles as the average distance of the moon and only seven inches as the focus of the lens, we are working from comparatively enormous distances down to infinitesimal ones, with every possible chance of error. Reducing the miles to inches and working out the proportion, I find that the diameter should be 1-15.8 inch. My measurement appears to be about an average of the other two dimensions, and as we are working as a basis from the *average* distance of the moon, and as the moon might have been at the time of taking the picture, at either its greatest or its smallest distance, the discrepancies may be thus accounted for. At all events the figures are interesting if not important, and agree closer than would be expected.

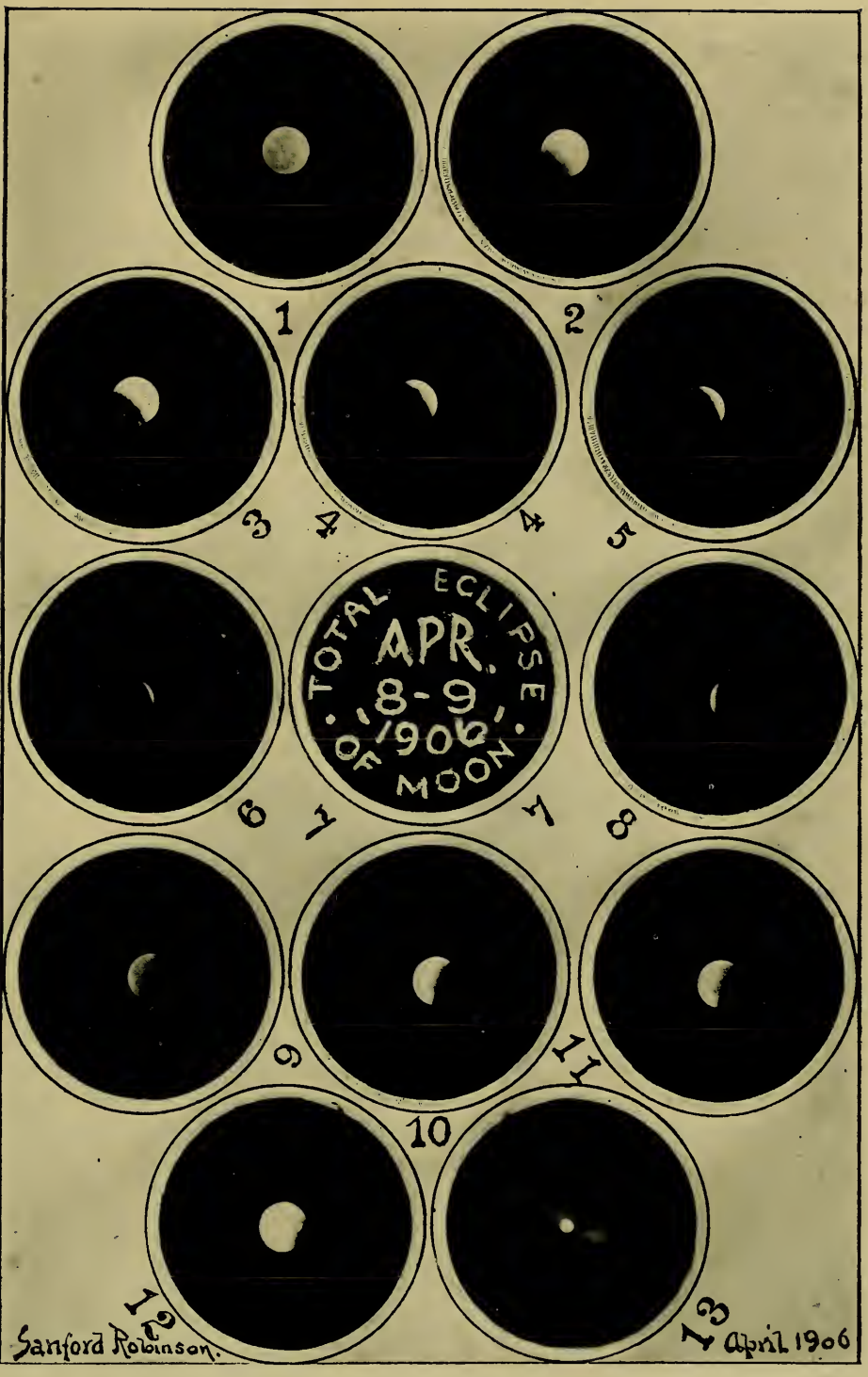
Now the question is, what am I to do next? There is no eclipse of the sun this year that is visible in the United States. I must wait for a total eclipse of that glowing orb, and then try to get the corona and, perhaps, who knows? I might get that intra-Mercurial planet that is supposed to exist close to the sun but which has so far eluded all the cameras and telescopes. Certainly, I would have difficulty in distinguishing it from a dust speck on the plate, but if I did find it, what glory for a poor amateur! But I must await the opportunity and in the mean time, what shall a poor tired amateur do? I pause for a reply.

The following table is a copy of the record kept during the eclipse and shows the times and durations of the various exposures made, as shown in the accompanying illustrations.

TOTAL ECLIPSE OF THE MOON, APRIL 8TH AND 9TH, 1906. PHOTOGRAPHED AT STEEPLE ROCK, NEW MEXICO, BY SANFORD ROBINSON. ELEVATION OF STEEPLE ROCK ABOVE TIDE 5200 FT. LONGITUDE, 109° WEST. LATITUDE, 32° 52′ N. STANDARD MOUNTAIN TIME.

NO.	DATE	TIME	EXPOSURE	REMARKS
1	8	9:30 P. M.	2 sec.	Full moon before commencement of eclipse.
2	8	11:05 "	3 "	Soon after entering shadow. (10:57).
3	8	11:19 "	2 "	
4	8	11:35 "	2 "	
5	8	11:41 "	2 "	
6	8	11:50 "	2 "	Just before totality. (11:57.8).
7	9	12:47 A. M.	3 "	During totality.
8	9	1:49 "	3 "	Just after totality. (Cloudy).
9	9	2:09 "	3 "	Cloud over moon.
10	9	2:13 "	3 "	Cloud over moon.
11	9	2.16 "	2 "	Clear.
12	9	2:31 "	3 "	Just before leaving shadow. (Cloudy).
13	9	2:50 "	3 "	Full moon with Beck lens *alone*.

It is not at all likely that the science of astronomy will be materially advanced by my efforts to capture photographically the different phases of the moon during its eclipse on the night of February 8th and 9th of the present



RESULT OF THE THIRTEEN EXPOSURES—EXACT SIZE

year, but I did not undertake the task in the cause of science. It was done principally for my own amusement, and so far as that was concerned I succeeded perfectly. I am one of those unfortunate amateur photographers who have outlived their youthful zeal in the art and who only indulge in photography when they can find something new and original to do in that line, and that is rather difficult. Amateur photographers, like the moon, go through several phases. When first infected by the *bacillus photographicus,* the amateur generally has a bad attack which has to run its course. I wish it understood that I do not refer to the "Kodaker" who is in no sense an amateur photographer, but belongs to another genus. He has no more right to be called an amateur photographer than the patron of a hotel who rings the bell for iced water or a cock-tail, has to be called an electrician. Both push buttons, and while one generally succeeds in getting his beverage, the other is not always fortunate in getting his picture. Neither understands exactly why the push should result in one case in getting a picture, or in the other of getting refreshment, nor does either care. The result is all that either considers, and the hotel guest (fancy being called a "guest" and having to pay for your entertainment) succeeds in about 100 per cent of his attempts, while the proprietor of the Kodak (will some one tell me why it was given that Arctic-like name, it is hardly to be supposed that it was invented by an Esquimaux. Why was it not called, for instance, a Kodok, which word has a warmer tone to it as though it originated in Turkey or Arabia) succeeds in only five or ten per cent of his attempts, and great is the waste of films and vast the fortune of the manufacturer thereof.

Ozobrome Material

Before this issue reaches our readers we will have a small supply of Ozobrome material, consisting of pigmenting solution, pigment plasters and transfer papers. The first we will have in four-ounce bottles only, costing about fifty cents each, and making twenty-four ounces of working bath. The plaster is in the 12x15 size, costing about two dollars per package of a dozen sheets, and coming in either warm black, blue black, vandyke brown or Italian green. The transfer paper is in sheets a trifle larger and in two surfaces, fine white smooth or medium grain matt, costing about a dollar per package of twelve sheets. The prices will depend upon duties and the like. We have asked Mr. Manley to send us this shipment merely to give our readers an opportunity of trying the process pending the establishing of an agency in this country. An able authority in England predicts that their future exhibitions over there will run largely to pictures in this process, and as we have and shall devote considerable space to Ozobrome, our readers will no doubt appreciate this opportunity of experimenting through our securing at least this limited supply. The full list covers some twelve colors exclusive of transparency and tri-colors, and a like number of sizes. The colors which we have are the most popular, and the 12x15 sheets can, of course, be cut to any desired smaller size.

CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

FAYETTE J. CLUTE, Editor and Proprietor

1915 POST STREET, SAN FRANCISCO, CALIFORNIA

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Our Report of the Oregon Camera Club Exhibit

While we pride ourselves on the good quality of the reproductions in this magazine and the ability of our engravers to reproduce values, it was out of the question making as creditable showing for our Portland friends as we would have liked. Nearly all the prize winning pictures were from enlarged negatives on carbon, platinum and gum, many of the latter in two and three colors, thanks to the example of Mr. Sleeth who is an enthusiast in this line of work. To have made blocks from these last would have necessitated careful work of orthochromatic skill in producing a dry plate negative from which a print could have been made for the process worker and his wet plate negative. This not being possible, recourse was had to Solio prints from the enlarged negatives, and the experienced worker can realize how far such prints fell short of giving the desired effects. Solio paper is no doubt perfection when used rightly, but it is not suited to the work of duplicating gum and carbon prints on rough support from enlarged negatives. For that reason, several of the prize winners are not shown, and others have been reproduced on a very small scale.

In All Kindness

At this season of the year one is inspired to an even more than usual kindly inclination, and it has occurred to the editor that he might possibly add to the sum total of editorial happiness of the photographic brand by inserting a few advertisements in this department this month. A careful search of our files fails to reveal the name of several of our brother editors, and in another case where two guilty parties are named, the same issue credits an article to "the" editor. Obviously, names and addresses can not be given in each case, and we must ask that replies be sent to this office. All care will be used in forwarding, and if necessary a messenger will be disguised as a possible subscriber.

FOR SALE—A second-hand halo, Saint Anthony pattern. For anybody who likes that sort of thing it is just the sort of thing they would like. With this simple piece of apparatus and a handful of flour placed in the right ear, amusement unbounded can be created even in the cultured atmosphere of Chicago.

WORK AT HOME—A color-picture prepared with "hand-colored water," whatever that is, will be given for a few hours' work in signing names and addresses on postal cards which will be furnished already printed, but not

stamped. Not necessary that the names be of those interested in photography, as the literature that is received in return can be used to advantage during this coal famine.

DESIGN COMPETITION—Books or "photo" supplies to the value of steen dollars will be given for the best design suitable for a magazine cover and the like. The words "Camera Work" must appear as prominently as possible, while at the same time the design must carry the word "Western" as inconspicuous as it can be made.

WANTED—A device that will prevent cuts printed in a photographic magazine by its own printing office from being run wrong side up or wrong way around. Something that will be suitable to the intellect of the average office boy who is entrusted with the work of making up the magazine.

SOLICITOR WANTED—A firm with a large supply of gold bricks which they must sacrifice is desirous of hearing at once from the party who has been reported as securing subscriptions for a photographic magazine supposed to cater to the professional trade. That the public has been warned against him by the publishers themselves is no objection providing he can prove that he has actually been able to secure subscriptions for that publication.

HISTRIONIC TALENT—A stock company that is at present presenting the farce-comedy: "The Photographic Error," is in need of a new member to take the part of "The Angel." One without previous experience preferred.

L. D. Hicks Returns

After spending several months looking after the interests of his firm in the East, Mr. Hicks is again on the Coast. His popularity with the trade and the profession in this territory is such that we cannot doubt his strongly expressed satisfaction at again being able to meet his host of friends in California and particularly San Francisco and the Bay cities. While his stay is not definitely determined, he will no doubt remain here for several weeks.

Hirsch & Kaiser's Enterprise

The firm of Hirsch & Kaiser have just consummated the lease of a new building to be at once erected for them on the north side of Post street, a few doors west of Grant avenue. The lease is a ten-year one, and covers the entire building, which will be five stories, brick and iron, with terra cotta front. The floors will be 50x122 feet, giving them approximately thirty thousand square feet floor space exclusive of basement. The location is one of the most desirable in the city, Shreve & Company occupying the next building to the east.

Mr. Prentiss in San Francisco

F. S. R. Prentiss, of the Mirmont Photo Paper Company, has been spending a week or more in this city and will visit other Coast cities before he returns. Mr. Prentiss is well known to the trade here, this city being the original home of the Mirmont firm which was just getting well under way when the fire came last Spring. His large circle of friends here is pleased to find him in such improved health, and to learn that the business of the firm now located at Glendale, Brooklyn, New York City, is progressing so well.

The Amateur and His Troubles

By FAYETTE J. CLUTE

Sepia Tones on Bromide Paper

Rich sepia tones are secured by several of the local workers on all kinds of developing paper and bromides by sulphide toning. The success of the method depends upon the washing between bleaching and redeveloping being of about one minute's duration under a tap that gives a steady and full stream without too much force. The final washing must be thorough to insure permanency. Three solutions are required; but one, a ten per cent solution of potassium bromide, is always at hand. The occasional worker will do well to make up a little ferricyanide of potassium of the same strength and note its color, and in the future dispense with measurements and mix up a little as wanted, judging the solution by the color. To bleach the print, place it on a sheet of glass or the bottom of a clean tray, wet it thoroughly and then go over it with a mixture of the two solutions mentioned above, which has been diluted with double its bulk of water and to which has been added a drop of ammonia to each two ounces, using a tuft of cotton for the purpose. Swab the print with this until it will bleach no more, or until the image all but disappears. Then the washing of one minute as advised and the print is redeveloped by going over it with a fresh tuft of cotton dipped in a four per cent solution of sulphide of sodium. Both solutions must be kept out of the light if prepared as stock solutions, and as the strength is not important they can be mixed as wanted and the amount approximated without weighing or measuring.

Ferricyanide and Uranium Intensifier

A correspondent writes to inquire as to a practical method of intensifying portions of a negative. I can hardly do better than to advise the use of the ferricyanide and uranium intensifier. This formula allows him to escape the use of mercurial methods, and after the whole negative has been strengthened, intensification can be removed from any portion by going over that particular part with a brush and a diluted ammonia solution of a strength of about one in twenty-five. In doing this the work should be carried on near a running tap, so that the slightest sign of spreading can be prevented by flooding the negative with water. Otherwise sharply defined boundary lines will be hard to follow. The formula for this reducer is as follows: A. Uranium nitrate, fifteen grains; water, four ounces. B. Ferricyanide of potassium, fifteen grains; water, four ounces. For use, take three ounces of each solution and add one ounce of glacial acetic acid. Immerse the negative in this until the desired intensity is secured. The resultant negative has a red color, which gives more printing strength than would be supposed. If over strengthened the intensification can be reduced by immersing the plate in weak ammonia water. Prolonged washing would also remove much of the strength, but is liable to cause streaks as allowing the water to strike the plate with some force. Fifteen minutes' washing is sufficient after removal from the bath. Distilled water should be used if possible in making up the two solutions.

Microgen and Its Factor

One of our Ohio subscribers writes to ask concerning this most excellent developer, one which I have used with much satisfaction, although not to the extent of giving it a thorough and comparative test. Its developing factor is nine, or rather, that factor gave me the quality I desired in negatives made to print with full detail on platinum paper. It is active as a developer for either plates or paper, but yet it does not cause the image to make its first appearance with a jump as do

some of the coal tar developers with a long factor. Neither does it exhibit the lingering lassitude of some others. While it responds promptly to the addition of bromide and its speed is such that control by that means can be secured without unduly prolonging development, bromide is not necessary, as it is a particularly clean working developer. The formula table does not advise its use. This formula table, which is given on the label and repeated on the wrapper, is a most convenient guide for using the developer, giving as it does in the briefest and most simple form the constituents of the developing solutions for plates, lantern slides, X-ray work, bromide papers and developing papers of the gas light class. Microgen gives density and detail in practically the same time and in the same order as does pyro. The color of the image forming deposit is a warm black, tending to olive as does that produced by pyro. While it has this advantage which is denied so many of the coal tar derivatives, it fails to stain the plates, paper or hands as does pyro. By increasing the sulphite as recommended in the formula for developing papers, velvety blacks are secured—blacks with no tendency to a muddy color or other objectionable tone. We are quite sure that our correspondent will find this developer a most excellent one and will be glad to advise further should he so desire.

Sure Cure for Metol Poisoning

One of our Ohio correspondents, C. S. Hawkins, of Kingsville, writes concerning our several mentions of metol poisoning and a remedy therefor, that he has found a cure or rather a preventive for its ill effects. It consists of rubbing lemon juice into the hands as thoroughly as possible immediately after developing with this most excellent reducing agent. He adds that he suffered for two years with metol poisoning, but since adopting the above plan has had no return of the trouble. After the poison has taken effect he suggests that it may take several applications to cure the eruption or peeling and cracking of the skin, but the lemon juice will have the desired effect if persisted in for a few applications. It has been pretty well established that metol acts as a poison only in combination with an alkali, and some have gone so far as to blame the alkali alone. But admitting that the alkali is a potent factor, it seems very likely that the application of the right acid at an early stage would neutralize the poisonous effect and prove most efficacious. Lemon juice is possibly just the acid that fills the requirements, and the advised treatment is certainly well worth a careful trial. I trust that my giving so much space to the subject of metol poisoning will not deter anyone from using this excellent developer. It is only in rare cases that it causes any inconvenience; cases in which the user seems to be particularly susceptible to that particular form of mild poison. I have seen many workers who bathed their hands in a metol solution for hours each day without any ill effects; in fact, I was some months locating a case of metol poisoning when that developer was first put on the market and a case of mild poisoning reported some months afterwards. Should a worker find it causes him trouble and any one of the many remedies prove inoperative in his case, he has but to discontinue its use, as the effects very quickly wear off if the use of the chemical is abandoned.

Photographing Burnt Documents Written in Pencil

"The burnt document should be fixed on a flat piece of wood in a dark room and placed in front of the lens at an angle of about 30 deg. It should then be illuminated by a powerful incandescent gas lamp so that the light falls on the document at an angle of about 80 deg. The lamp should be placed at the end of the board which is furthest from the lens. If now the image is examined on the ground glass the writing will be seen as luminous, though faint, lines. On the negative the characters will appear black on a grey ground. It is necessary, of course, to use a yellow sensitive plate, and from the position of the document very small diaphragms must be used, and hence follows a very long exposure. In the positive the writing will appear in white on a dark ground. This method is of great value.

Mounting Bromide Enlargements and Other Prints

Have your enlargements perfectly dry and fairly flat. Some instructions tell you to dry your bromides after washing by hanging them up by clips. Of all ways this is the worst, inasmuch as the clips leave marks on the paper or tear it, or both. All prints should be dried by being laid face downwards upon perfectly clean cheese-cloth, preferably stretched smooth.

Mount prints bone dry. If you mount a bromide wet it will curl the mount, as its contractile power in drying is very great, and amateurs are not usually provided with appliances for overcoming this curl.

Trim your picture, if it requires it; and perfectly straight, clean cutting can be accomplished by putting that part of your picture where you intend to cut on a smooth, thick cardboard; and, using a steel straight-edge as a guide for a sharp knife, score along the line on which you intend to cut; next lifting the straight-edge and complete the cutting with a pair of long shears.

Find the exact position on your mount of the two top corners of the picture, and mark these thereon with the point of a hard, sharp pencil. Turn your bromide face down on a sheet of paper—newspaper will do—considerably larger than the picture. Have another sheet of this paper ready in case of accident. Use a good photo mounting paste, sufficiently moist to spread quickly and thinly, but not watery. Use a two or three-inch brush, rubber set. A good method to get the paste of the right consistency is to dip the tip of the brush in clean water and then work it over the paste till you have a smooth-working, creamy brush full.

If your picture is a large one, hold one end of it down with a couple of paper-weights. Another weight on each side will not do any harm. You can look after the near end with your finger.

Go over all the picture, except half an inch round the edge, with the paste brush, working the paste perfectly smooth and clear, free from streaks, hairs or crumbs of dry paste. Remove one of the paper-weights and paste the half-inch remaining edge with the driest paste that you can get to work freely, in turn removing all of the paper-weights. See that every portion of the edge is thoroughly pasted and the paste not too dry. About this time you may have some trouble on account of the edges endeavoring to curl under; but a very little practice will make you sufficiently alert with the first finger of your left hand and the paste brush in your right to prevent this curling under. But if it should by any chance be too quick for you so that some of the paste reaches the under sheet of paper, where it may ultimately get on the face of the picture, immediately lift the print on to the spare sheet which you have at hand and continue the use of the paste brush till the print is limp and has but little tendency to curl.

Then lift the picture carefully, seeing that you do not touch the paste on the extreme edge anywhere, as this would prevent these parts from adhering to the mount properly. Turn the picture face up and lower it as correctly as possible toward its place on the mount. This is best done by holding it near one top corner with one hand and by the middle of the bottom with the other. Put one corner down just over the spot which you have marked on the mount; then the other corner in the same way With one dry finger press down the picture lightly a little way from the top edge, from one corner to the other; then, with a clean and perfectly dry, soft handkerchief, gradually follow down the center of the picture as you lower it into its place. Then, with the handkerchief, rub gently from the center to the edges; and, when all bubbles are out, rub firmly along each edge, seeing that every part of the edge adheres.

If any paste shows on the face, wash it off gently with a few drops of clean water on the handkerchief. If the picture is a large one, it will be better to put it under pressure till perfectly dry.

These instructions seem very elaborate and might lead the tyro to imagine that the process was a most difficult one, but the fact is that after a little practice you can perform the whole process in less time than you have taken to read these few lines. A small print will not take more than two minutes by the watch.

How to Avoid Reflections in Copying

E. Todd, a correspondent to "Photography" describes how he succeeded in copying a picture under glass with entire absence of reflections. He placed the picture in a room with a north light and *tilted it upwards* until all reflections disappeared; the camera back was then swung forward until plate and picture were parallel, and a small stop used. The idea seems to be new and is doubtless efficient and has the further advantage as Mr. Bailey points out, of eliminating the possibility of reflections of the lens on its mount.

A Proper Faucet

I was in a dark-room the other day that was a model in one respect, and that was the water faucet over the sink, or rather, there were two of them. The owner of the place had caused considerable damage by allowing the sink to overflow, and as his sink was long and narrow he had experienced considerable difficulty by striking negatives and trays against the ordinary faucet with which he was originally equipped. The old fixture was particularly obnoxious when he desired to empty the contents of a large tray. He decided to overcome these difficulties and another, irregular pressure, once and for all. Being somewhat acquainted with plumbing work he fixed up a tap that looked like an inverted J springing from a short piece of pipe coming through the wall, the stem of the J turning at the point of connection. The piece of pipe forming this J was held flat against the wall and out of the way when not in use by a coiled spring which encircled its lower end. Swinging the shorter end around over the sink the water at once flowed and continued to do so while the pipe was held in that position. The curve in the pipe prevented any splash, and the amount of flow was regulated by the amount of the swing. The moment the pipe was released from the hand it returned to its normal position against the wall and the flow of water ceased. There was of course no provision made for a continuous flow such as one would want in washing plates or prints, but he told me he always preferred to perform such work outside of his dark-room, as it was more convenient to do the work with more light and room than was available in the close quarters of his sink. Inquiry brought out the statement that any plumber of ordinary ability could install a similar arrangement—in fact, he thought there was such a device listed in the large trade catalogues of plumbers' supplies.

Making Paste

A correspondent says he uses a lot of paste and is convinced that the right way to go about it is to give up trying to make a large quantity to be used as wanted and make a fresh supply each time. To this end he wants a formula that will give a good paste of the right thickness and one that will have good sticking qualities, while at the same time being simple and easy to prepare. He further wishes to avoid having to dilute it after having once made up a lot, for he is convinced that such addition of water to the cold paste is very detrimental to its adhesive qualities. He also wishes to avoid if possible the mussy job of straining through cloth, as he has seen it performed in some studios. This is rather a list of requirements, but I think I have the directions for making a paste that will fill all the demands. All that is necessary is to thoroughly mix an ounce of best laundry starch with an ounce of water and then pour it into three ounces of boiling water that has just been lifted off of the fire. Stir constantly until smooth and of a jelly-like consistency, and then set aside to cool. A skin will form on the top, and that should be removed before using the paste. These are the proportions for a rather thick paste, and should a little thinner article be desired a little more water should be put to boil at the second making. Of course, a greater or smaller amount may be made up by using proportionally more of the starch and the two portions of water.

A Photographic Digest

By H. D'ARCY POWER, M. D.

All communications for this Department should be addressed to H. D'Arcy Power, M. D., Burlingame, San Mateo Co., California

Contrast in Platinotype Prints

"In the early days of the platinum process it used to be said that nothing but good, strong, plucky negatives would yield good prints. There is no doubt that a more vigorous negative was wanted then than need be used now, but even today it wants a good average negative to yield a good print—a far more vigorous one in fact than is required for such a process as gaslight paper. It has recently been said that the composition of the developer exercises a very powerful result upon the vigor of the prints, and that by the use of one in which there is a very small quantity of potassium nitrate strong prints can be obtained from very weak negatives. The formula which is suggested is one containing two ounces of neutral potassium oxalate, half an ounce of potassium phosphate, and one and one-half grains of potassium nitrite (not to be confounded with potassium nitrate) to the pint of water. Anything very much above the proportion of nitrite given is to be avoided. Of course, it is not to be expected that this process will give as good prints as are to be got from negatives of adequate density and developing in the usual manner."—Photography.

Enlargements in Gum

Dr. Hiecke, of Austria, has recently succeeded in making direct enlargements in multiple gum bichromate. His method is, first, to increase the sensibility of the gum mixture by coating some time before exposure; secondly, by permitting direct extraneous light to fall on the sensitive surface while the printing is going on. I have occasionally noticed that when a hopelessly under-exposed plate is lying in the developer without any image appearing, if the actinic light be allowed to fall on the plate the outlines will often appear. Apparently the secondary illumination used by Dr. Hiecke must act in an analogous manner. He used an arc lamp in combination with a seven-inch lens, working at f-5, and for the supplemental light two thirty-two candle power incandescent lamps, one on either side of the print at a distance of about fifteen inches. Twenty minutes exposure sufficed for a good print.

Reversed Negatives

I reprint the following letter to the "Amateur Photographer" (English). I have not tried the method, but it seems worth experimenting with:

"Sir: A short time ago there appeared in your correspondence columns an inquiry regarding the production of reversed negatives for carbon printing. The following facts may be of interest to your correspondent, and, perhaps, to other readers of your paper:

"If it were possible to produce a negative from a negative direct without the intermediate stage of making a positive the resultant negative would, of course, be reversed. Impossible as this may seem to be, it can be done, and the process is as simple as that of making a transparency or a bromide print.

"It is well known that P. O. P. deeply over-printed under a negative is negative in character. The same effect can be produced on a sensitized plate. If a plate be exposed under a negative in the ordinary way, but to the direct rays of the sun for a few seconds, and then developed, the result will be not as one would expect, a very much over-exposed negative, but a negative of good quality. I have obtained equally good if not better results by exposure to magnesium light.

"I should advise carbon workers to give this method a trial.

"Yours, etc.,

"NOEL ROBERTS."

Hyperfocal Distance

To know the distance beyond which all objects are in focus (that is to say on the ordinary basis of a circle of confusion of one one-hundredth of an inch) is often of great importance. As is well known this varies with the stop used, the distance diminishing as the aperture is decreased. Tables of hyperfocal distance are given in all works on photographic optics, but these are not usually carried in the pocket, so that we may be thankful that Dr. Lindsay Johnson has provided us with a rule that enables us to dispense with experiments and tables. It is to the effect that in the case of a lense stopped to f-8, the focal length in inches is multiplied into itself, or squared, and the result is the hyperfocal distance in feet. Thus a six-inch lens at f-8 will have a hyperfocal distance of thirty-six feet.

Extra Rapid Flashlight Powder

Thomas Bolas gives the following particulars in the "Amateur Photographer" (English) for the making of the most rapid form of flashlight powder:

"In the production of flashlight, aluminum may do excellent service, as in ordinary cases a much more rapid flash can be obtained with an aluminum flash mixture than with a magnesium mixture, and this notwithstanding the fact that it has been established that with similar mixtures of metal and potassium chlorate the magnesium flash and the aluminum flash are about the same in duration, but the practical difference steps in from the fact that the aluminum bronze powder can be obtained in an extremely fine state of division, whereas the commercial magnesium powder is rather coarse, almost like filings, and there is scarcely any hope of a really fine magnesium powder appearing in commerce, as unless sealed in glass tubes it would be liable to oxidize so rapidly as to be uncertain in its action.

"To produce the most rapid aluminum flashlight it is necessary to obtain the finest aluminum bronze powder—the kind employed in making the so-called aluminum paint. Twelve grains of this will be enough for an exposure in a moderate sized private room. On a sheet of cardboard the twelve grains of aluminum are mixed with sixteen grains of recently dried and very finely powdered potassium chlorate, the mixing being performed very thoroughly with a rather stiff feather, as the bearded part of an ordinary quill pen, but the quill pen should be extended in length by mounting it on the end of a pencil so that if the mixture should explode the hand may not be burned, and of course the face should be kept well away from the mixture. The sheet of card being held by the edges and doubled so as to form a gutter, it is easy to shoot the mixture as a heap on a metal plate or tile, and this without danger of serious burning should there be an inopportune ignition. The mixture can now be ignited with a long taper or a match at the end of a stick about fifteen inches long. The flash will generally last about one-thirtieth of a second, more or less, the duration being according to the fineness and dryness of the potassium chlorate."

A Simple View Meter

An improvement on the rectangular opening in a card employed by artists is suggested by M. Molteni.—"Bull. Soc. Fran. Phot." It is to make a small, round hole in the bottom of a pill box for the eye to look through, and to cut a rectangular opening in the cover to correspond with the view shown by the lens on the plate.

A New Method of Developing Printing-Out Papers

I have from time to time drawn attention to methods of developing printing-out papers; the following excerpts from a specification lodged at the British Patent Office offer advantages that claim consideration:

"No. 13,032, 1905. This invention has for its object a new or improved process for printing and developing silver chloride paper, whereby much greater speed of operation is obtained, the cost is very much lower than in the gold process and the results are more brilliant and show greater detail.

"The invention consists mainly in using cyanides or sulphocyanides in the developer. One tablet of the developer is

to contain four grains of pyrogallic acid with or without inactive material, and the other to contain one-thirtieth of a grain of bichromate of potash, one-fourth of a grain of sulphocyanide of potassium and one grain of citric acid with or without inactive material, such as sugar of milk. These two pellets or tablets are dissolved in about five ounces of water.

"Another formula giving excellent results can be obtained by a combination of the pyrogallic acid and metol in the one tablet, and the bichromate of potash, sulphocyanide of potassium and citric acid in the other. The proportions are as follows:

Pyrogallic acid	3½ grains
Metol	½ grain
Bichromate of potash	1-60 grain
Sulphocyanide of potassium anhydrous	¼ grain
Citric acid	½ grain

with or without active material, such as sugar of milk. In place of pyrogallic acid about the same weight of metol may be used. If metol be used it gives a blacker tone and increases the speed of development. One and a half grains of metol and three grains of hydroquinone give a tone midway between pure metol and pure pyrogallic acid. There are other reducing agents which can be used in substitution of them, but not with such good effect. The bichromate of potash is used to increase the speed of development and other alkaline bichromates can replace the bichromate of potash, but there is no advantage in using any of these over the potash salt.

"To obtain the address side of a postcard absolutely clean, addition is made to the developer of one-quarter to one-half a grain of metabisulphite salt of which potassium is the most suitable. This prevents the address side staining without interfering with the action of development.

"The great difference between the process and any other is: That whereas in all other known processes for developing silver chloride papers, as soon as the photograph is placed in a solution the free silver which has not been reduced by action of light is washed out of the emulsion, is instantly attacked by the reducing agent, pyrogallic acid, metol or whatever is used and reduced to the black metallic state. This is deposited both on the dish and on the print, whereas with this process by the addition of a cyanide salt to the developer as soon as this free silver is washed out, instead of being reduced to the metallic state by the reducing agent, it has a far greater affinity for the traces of the cyanide salt, and instantly flies to the traces of the cyanide salt and forms tiny, yellowish-white grains of cyanide of silver which will not stick to anything."

A New Method of Making Reversed Negatives

The same journal reports the following method, published by R. Zima in the "Photographische Correspondens":

"A well-cleaned sheet of glass should be rubbed over with a 0.5 per cent. solution of silicate of potash and then coated with a 2 per cent. solution of gelatine, preferably hard collotype gelatine, and dried. It should then be sensitized in a 2 per cent. solution of ammonium bichromate and dried. It is then to be exposed under the negative, the duration of the exposure to be controlled by a photometer in which should be a strip of gelatine paper sensitized in the above bath. After exposure the plate should be well washed in running water till the film is free from color, and to remove the reduced chromium salt it can immersed in a very dilute acid sulphite solution or a 2 per cent. solution of metabisulphite of potash. The plate should then be immersed in a solution of platinschwarz M, a dye made by Meister, Lucius and Bruning. This dye only stains the unhardened gelatine and the negative is thus obtained which is absolutely free from grain. This process should be particularly useful for collotype and carbon workers. If a transparency be used the result will, of course, be a transparency, and as bright and dark blue, green and brown dyes are obtainable, this process will be a welcome method for making lantern slides, for the latter possessing no grain show very well on the screen."

Developing Without Rocking

Rudolf Walter, in a recent communication to the "Photographishe Rundschau," described a method of development that has evoked considerable interest and criticism.

In explanation of his practice he first states that when light strikes a photographic surface silver bromide is reduced and bromine set free, proportionately to the intensity of the action. When an alkaline developer comes in contact with the free bromine it forms a bromide, which as we well know is a powerful restrainer. It therefore comes to this, that the greater the action of the light the more restraining bromide will be formed at that point. The high lights should therefore be held back proportionately to their intensity. In practice this natural effect is entirely lost by the rocking of the development pan, which washes out the bromide and distributes it through the mass of the solution,"but," says Herr Walter, "if you use a very weak developer entirely free from movement, and lying so absolutely flat that the strong bromide forming over the high lights has little tendency to invade the neighboring shadows, then these relations will be preserved and deposit will grow on shadow details while the high lights are held back." In proof of his theory he sends to Dr. Neuhauz, the editor, a batch of negatives which that well-known expert declares to be astonishing (Verbluffend). Objects taken directly against the light showing some fine detail where strong halation would normal show.

The modus operandi is to fill a good quantity of Hauff's glycin stand developer, one in forty, into a perfectly levelled pan covered by a lid that can be removed without shaking the pan; into this the negative is placed and left undisturbed for half an hour, when the cover should be very gently removed and the progress of development noted; but no movement of the pan must occur until development is complete, otherwise the well-known mottling of an unrocked development will spoil the result. For negatives which must of necessity show strong contrasts, the process seems worthy of trial.

Answers to Correspondents

Pyro Formal Developer

Pyro, two drams; sodium sulphite, five ounces; formaline, four drams; water, one quart.

Dianol Developer

Dianol, one hundred and ten grains; sodium sulphite (dried), one and one-half ounces; water, fifty ounces. Has little keeping quality.

Sulphur-toned Lantern Slides

In a December number of "Photography," Mr. Dudley Farrer draws attention to the fact that the various sepia toners on the market are just as applicable to the toning of lantern slides as they are to Bromide or Velox. He suggests the use of ten drops of the sulphide solution to the ounce of water, giving sufficient time for the action to go right through the film.

To Secure Gradation in Bromide Prints

The simplest method is to make a bath of potassium bichromate, or better, chromic acid of one in the thousand (seven grains to the pint), in which the print is immersed for one minute; then lightly wash off and develop as usual. The effect is to permit of the retention of shadow detail while the high lights develop.

Developing Platinotypes

According to Dr. Jacoby, in the "British Journal of Photography," the following developer will give warm blacks with absolutely pure whites on ordinary black-tone platinotype paper:

Potassium oxalate	250 parts
Zinc oxalate	100 parts
Water	1,000 parts

Heat to 77 degrees Fahr. If the color obtained is too warm, less zinc oxalate should be used. To obtain sepia tones he recommends the use of ammonium monophosphate, NH_4, H_2, PO_4, with a little cupric sulphate.

Potassium oxalate	200 parts
Ammon. monophosph..	50 parts
Cupric sulphate	2 parts
Water	1,000 parts

The prints should remain in this developer at least five minutes.

Club Notes

Seeretaries and others are particularly requested to keep the Editor of Camera Craft fully advised of the doings of their respective clubs and societies

Portland Camera Club Announcement

The very best photographic publications, in large variety, are at your command. Why not drop in and look them over?

Arrangements are now being made for a series of exchange exhibits of from twenty-five to fifty unframed prints with some of the leading clubs of the country, Washington, Baltimore and Boston being among the first, with others to follow. The object is to have a new exhibit once a month during the winter, for study and comparison. In order to make this possible, a club exhibit must be prepared for exchange. For this, each member will please have from three to five mounted prints at the Club rooms on Friday evening, January 4th. A selection from these will be made for the exhibit. Attention is also called to our annual club exhibit. Entries will close for this on Friday evening, February 15th. The same rules govern as in previous years, namely: All photographs framed or passe-partouted will be hung. It is hoped all members will be represented.

The club has again joined the American Lantern Slide Interchange, and reports from same say that a higher quality of slides will be sent out than ever before. The first set is from the Orange, N. J., Camera Club, and will be shown at the club rooms on Friday evening, December 21st. Other sets will follow through the winter. You will want to see them.

There are people enough in this vicinity who work a camera, not members of the club, who would gladly join if the matter were presented to them. The officers of the club would like to have fifteen or twenty new members for the new year. Will each member show his interest in the club by trying to secure a new one? Your help is earnestly desired in this direction. If you have a friend or know of some one who works a camera and does not belong, kindly let him know that our exhibitions of photographs, our lantern slide exhibits, our club room privileges, our outings, our magazines, our demonstrations are worth much more than ten cents per week, the cost of membership. If you have any difficulty with your photography, kindly drop in at the club rooms any Friday evening and talk it over with the members. The experience of the whole club is yours.

O. P. T. WISH,
Secretary.

Chicago Camera Club Activity

At the meeting Thursday, December 20th, 1906, a fine set of interchange slides were shown. The rejected slides sent for the 1907 box to the New York committee had been returned, and the contributors talked them over and discussed the matter at length. The Christmas dinner has been changed to a New Year's one, and will be held January 10th, 1907, instead of December 18th, 1906, as previously announced. A good time is assured, and members are asked not to make any other engagement for that evening. Every one should be on hand to help out. Introduction cards have been mailed to all members for use in getting that new member. More can be obtained from President Tuckerman or Secretary Hale.

CLARENCE B. HALE,
215 Jackson Blvd. Secretary.
Room 506.

The Toronto Camera Club

The Toronto Camera Club (incorporated), of Toronto, Canada, held its first meet of the New Year on the evening of January 7th. The main feature of the evening was the exhibition of the Buffalo Camera Club's slides, received through the American Lantern Slide Interchange. The collection was composed of one hundred

and twenty well-chosen subjects, all of which greatly interested and pleased the members and their friends who were present.

The slides, being from negatives taken both abroad and at home by the Buffalo Club members, were necessarily of greatly varied subjects. Among them were some fine pictures of California, and also of Mexico, showing the ruined cities. Some fine examples of nest photography and flower studies were also shown. Messrs. Phipps and Countryman's photos of the Lackawanna Steel Works and the steel industry at Buffalo, were excellent. First was shown a panorama of the entire steel plant, followed by other pictures of the different branches of the industry, including the unloading of iron ore, by mammoth cranes, from the ore steamers, and the pouring of the molten metal from ladles—views that proved exceptionally interesting. Some fine winter pictures of Niagara Falls were among the collection. The ice-sheathed shrubbery of Goat Island made a real fairyland of the scenes, their beauty being added to by the brilliant effect of the white light of the lantern. The Buffalo Club must be highly complimented for their excellent work. One hundred and twenty slides is an exceptionally large number from a single club, but quality was not sacrificed for quantity in this case. Not a single slide failed to show up well on the screen, their densities and contrast being perfect.

The Toronto Camera Club was organized in 1887, incorporated in 1893, and now enjoys a membership of over one hundred and sixty enthusiastic photographers, including both amateur and professional workers.

January "American Boy"

The January "American Boy" is, in the language of the boys, "a hummer." Its most conspicuous features are its serials by Stratemeyer, Shute, Tomlinson, Alger, and Sprague, and its four new departments, namely, "Chats with Big Americans for Young Americans," "How to Become Strong," "Practical Furniture Making for Boys," and "Keeping Tab on the World for Wide-awake American Boys." There are six short stories, about a dozen leading articles, any number of humorous skits, and the usual departments relating to boy life, including photography, mechanics, electricity, stamps, coins and curios, puzzles, etc. In the biographical department, Henry Clay is given the place of honor this month. It has a striking two-color cover—a skating scene—and, in addition, seventy-five illustrations. Altogether, it is one of the best numbers of "The American Boy" ever issued. $1.00 a year. The Sprague Publishing Company, Detroit, Mich.

Photo-Secession Exhibition

An exhibition of drawings in black and white and color, by Miss Pamela Colman Smith, will be held at the Little Galleries of the Photo-Secession, 291 Fifth Avenue (between Thirtieth and Thirty-first Sts.), New York, opening on January 5th and closing January 15th. The Galleries are open from 10 a. m. till 6 p. m., daily, Sundays excepted.

Undiscovered Attractions of Flowers

It is not always the flowers with the greatest expansion of petal, nor yet those with the sweetest scent, that attract the greatest number of bees and other insects. Often plants with the most insignificant of flowers, and no odor at all are found to be swarming with insect visitors. The common European bryony (Bryonia dioica), one of the gourd family, is a plant of this kind. Some have suggested that the attraction consists of an odor that we cannot perceive, but which is noticeable enough to the bees, while others have been inclined to the opinion that the flowers emit ultra-violet rays, which, as Lubbock has shown, are perceived by both bees and ants. A German, Knuth by name, was first to make this suggestion, and in support of it, he experimented with bryony flowers and found that they really affected photographic plates.—"The American Botanist," for December.

Notes and Comment

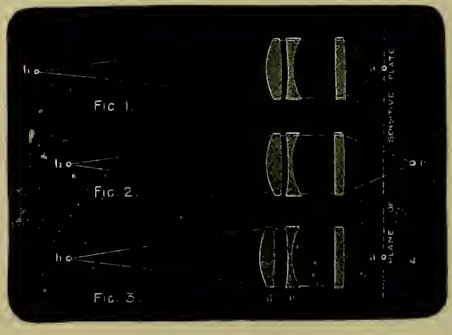
The Graflex Principle and the Cooke Focusing Lens

The adoption of the advantages of the focusing Cooke lens to cameras of the Graflex type is worthy of more than passing notice, forming as it does a combination of two features that result in a camera which has many advantages in the way of compactness and convenience.

This has been achieved in the new Auto Graflex, Jr., the latest addition to the excellent line of Graflex cameras made by the Folmer & Schwing Company, of Rochester, New York. The moderate price at which it is sold will make this instrument, suited as it is to ultra rapid work, a popular one with amateurs. This Cooke Focusing lens is the well-known anastigmat working at f-6.5, manufactured especially for the Graflex, Jr. Its construction allows of focusing objects at various distances without changing its position in relation to the plate, thus avoiding the necessity of a bellows or other means of moving the front-board or that portion of the instrument to which the lens is attached. The diagram herewith explains the principle upon which this simplification of the camera construction is based in the Graflex, Jr.

Fig. 1 represents in section the three simple glasses of a Cooke Lens, which form at the point "a" an image of the distant object "b." In Fig. 2 the object "b" is shown nearer the lens, so that with any ordinary lens, the image would fall at "c," and be out of focus on the sensitive plate. In Fig. 3, however, it is shown that by increasing the separation of the glasses "d" and "e," the focus of the entire lens is altered sufficiently to bring the image of the near object "b" to focus at "a" upon the sensitive plate.

We also show a cut of the camera itself showing the convenient location of the large milled disk which controls the adjustment of the graduated ring that regulates the separation according to the focus desired. This ring is graduated to a scale and requires but half a turn to cover the adjustment of focus between that for a most distant object and an object close at hand. The milled disk which shows plainly in the illustration, is located where the thumb of the right hand can control and regulate the focus with practically the spontaneity of thought; in fact, the matter of focusing with one of these cameras soon becomes as instinctively automatic as the movements made in walking. A similar disk protrudes in like manner from the opposite or left-hand side where the size of the stop or dia-



phragm is regulated in the same simple manner. All the dealers are supplied with the new Graflex catalogues covering this line, and they can also be secured direct from the Folmer & Schwing Company, Rochester, New York.

Hyatt's New Catalogue

We are just in receipt of a copy of "General Catalogue No. 17," listing the high-grade photographic apparatus and supplies that are manufactured and distributed by the H. A. Hyatt Supply Company, Seventh Street and Washington Avenue, St. Louis, Missouri. Its pages, which are about twice the size of the ordinary catalogue, number some two hundred and forty-four, all handsomely illustrated. In fact, the book is encyclopaedical in its scope and coming as it does in a well-made container to hang against the wall, should be invaluable as a reference book to all users of photographic supplies. A copy should be secured before the supply is exhausted, and for that reason an early request for one should not be delayed.

Daylight Development

This is the headline of an attractive advertisement in this issue, and we would particularly recommend our readers to look up this announcement and read it carefully. In our estimation, Burke & James are, as usual, very fortunate in their selection of so timely a piece of apparatus as the subject of their advertising matter, for the reason that tank development is no longer a talked-of theory but it is, as they claim, a method that has the endorsement of actual use by the highest authorities, as well as the sanction of constant, every-day employment in many professional studios. This tank manufactured by them is peculiarly adapted for use in daylight, and the advantages which they claim for it over the ordinary methods are easily demonstrated by a trial, and, aside from the utility of the tanks, their prices are exceedingly low for such well-made articles. Any photographer, whether professional or amateur, who is interested in his work, cannot afford to neglect the opportunities for keeping abreast of the times, and for that reason they should see one of these tanks. The goods of this enterprising firm are so generally stocked by the best dealers that no difficulty should be experienced in having one shown to you.

California Landscape and Architecture

Rare and highly distinguished as the California countryside is, it would be a great mistake to assume that its high distinction demands a peculiarly Californian type of building. Doubtless any traditional type of residence which came to prevail would have to be modified in certain respects, in order to adapt it to the peculiarities of the climate and the life of the inhabitants. Nevertheless Californians should never forget that the distinction of their landscape consists in its possession to an extraordinary degree of some ordinary qualities. It is a consummate example of certain characteristics in a countryside, which have in the past proved to be most permanently satisfactory to people, who combined elaborate and cultivated tastes with the love of nature. Its architecture should not mutilate the natural grace of the countryside in the interest of some stiff and rigid scheme; but neither should it fear to impose an appropriate architectural scheme upon the round contours of the hills. It should not try to imitate natural effects in its layout and planting nor should it seek to sear the landscape with lines which ignore and disregard such natural effects. Just as it is the part of good manners to be polite and cordial without being stiff and insincere, so it is the part of good landscape architecture to be formal and self-possessed without being unnatural and prim. In the absence of some such intimate and successful combination between the artificial, practical and aesthetic needs of men and the artless irregularity and diversity of nature, the architecture of a country house and its grounds cannot possess any classic propriety of form.—Herbert D. Croley, in "Sunset Magazine" for November.

CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

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CAMERA WANTS

Advertisements under this heading will be charged for at the rate of 50 cents each insertion for twenty-five words or less. Each additional word, two cents extra.

For Sale—At less than half list, one 4x5 Pony Premo No 7 new, with film pack, etc. Address T. J., care Camera Craft.

Wanted — A position as retoucher or general assistant. Best references. Address: I. H., care "Camera Craft."

Wanted—A position by a sober Japanese having a good all-round experience; bromide enlarging a specialty. Address S., care of Camera Craft.

For Sale—Kodak supply and finishing business in center of best retail section of San Francisco; small capital required. Address L., care Camera Craft.

For Sale—At a low price, a fine studio for sale in Stockton. $600.00 will buy; good business. Address: B. H., care "Camera Craft."

For Sale—Photo Studio, the best location on Broadway, Los Angeles. Well equipped. Must be sold. For terms address Howland & Co., 510 South Broadway, Los Angeles, Cal.

For Sale—One Premo Camera No. 4, 4x5 and one Premo Camera No. 6, 6½x8½, Planatograph lens, nearly new, no reasonable offer refused. Address H. J. Luttig, Franklin, Cal.

For Sale—Cheap for cash. Tintype outfit complete; four Darlot ½ lenses, case of tin, silver bath and silver dry, camera, tripod, bath, tent, darkroom, etc. W. D., care of Camera Craft.

For Sale—5x7 double Anastigmat F6.8 Wollensak shutter, wide angle Anastigmat to fit above; $25.00. Wanted 5x7 Premo No. 7 or Century Grand with or without lens. R. Glasgow, Wilburton, I. T.

For Sale — One 6½ x 8½ Century camera, Premo tripod, six plate-holders, Turner-Reich 10¾-inch focus lens with Barre shutter. One 11-inch focus Dallmeyer single landscape lens. One Dallmeyer extreme wide-angle lens. One Kuster pinhole lens. Bausch & Lomb ray filter. Wynne exposure meter. Carrying case. All complete, and in first-class condition. Address: A., care "Camera Craft."

Wanted—A situation by an experienced man at developing, finishing and enlarging; expert with Velox, Artura. printing out papers, etc. Address O. D. Turner, 2011 First Ave., Spokane, Wash.

For Sale—Leading Studio in town of 3,000; invoice price, $400.00. Large operating room; single-slant light; fine opportunity for young man or lady. Address: H., care "Camer Craft."

Wanted—Amateurs having cameras (not Kodaks), 4x5 or any size larger, can earn $5.00 per week by taking pictures for us at home. Send stamp for particulars. Oval Portrait Co., Caxton Bldg., Chicago, Ill.

For Sale—Best equipped studio in California; works up to 11x14: Bromide room, in fact everything. In first class condition; long lease and low rent—$18.00; doing good business, sickness cause of sale. W. D., care of Camera Craft.

For Sale—The largest and best equipped studio in Central California. Fitted up to 11 x 14; and everything new. Doing first-class work at good prices, and the town is one of the best growing ones in the State. Address: J. M., care "Camera Craft."

For Sale—6½x8½ King View Camera, two double plate holders, extra 5x7 back, 5x7 Premo film pack adapter, 6½x8½ series V Zeiss wide angle lens, carrying case for camera, tripod, plate holders and lens. Best offer takes outfit or any part of it. Address Will H. Fouts, Dayton, Wash.

Wanted — 20 x 24 Camera (long bed) and lens; good order; state make of outfit and lowest price. Address: S., care "Camera Craft."

For Sale—Leading photo studio in a growing city of 30,000; best town in northwest Washington. Doing a good business; very best location; cheap rent; does strictly high-grade work. Other interests demand attention. Investigate this. Address: Box 474, Bellingham, Wash.

For Sale—I have two good-paying studios in Northern California. Population, 4,000 and 5,000. One is located in the best business town in California. Both leading studios with one competitor. I will sell the choice of the two. For further particulars, Address: C. S. B., care "Camera Craft."

FOR SALE CHEAP—NEW STUDIO

The leading Studio in western city of 100,000 population; ground floor; built two years ago; big trade, well established; fine location; must sell by January 1st, as important financial interests call owner East; will sell for less than cost of fitting up. Address T. H. X., care of CAMERA CRAFT.

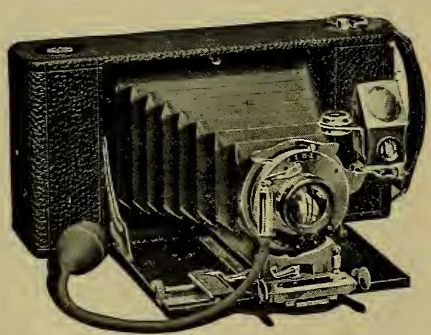
For Sale—One double stereopticon with single and double slide carriers, Darlot one-half-size lenses fitted with Nernst lamps, complete with carrying case—all in first-class condition. Address: A., care "Camera Craft."

An Easy Way to Learn Carbon Printing

What fascinates the public and makes the carbon process so very interesting; are the many different tones or colors at command and the great variety of surface textures afforded by the new art papers now in use; which makes it possible to treat each subject in an artistic and most becoming style; It is a matter of fact, that the practical and up-to-date methods taught in Marton's new treatise on "The Modern Methods of Carbon Printing" has convinced many professionals, of the simplicity, and great practicability of this valuable process, and has turned many a sceptic into an enthusiastic admirer of this beautiful process. Every studio in the country should have a copy of this valuable work, and join the fast increasing army of carbon printers. Sent post paid upon receipt of $2.65. A trial package of our new rapid sensitizer for carbon tissue, with full directions, etc. enough to make 500 pictures sent post paid for $1.00 (no stamps.) Marton's Carbon Studio, Bloomington, Ill.

"OPENS THE CORRECT WAY."

For Pictures 3¼ x 5½.



No. 3 B Folding Hawk-Eye

A Companion worth having: Capable of making records of value.

Daylight loading—superb lens—accurate shutter—every adjustment.

Price, = = $20.00

BLAIR CAMERA COMPANY,

Send for descriptive catalogue. Rochester, N. Y.

Eastman Kodak Company

ROCHESTER, N. Y., *The Kodak City.*

THE KODAK BOX.

Here is just the thing to present to the youngster you wish to interest in photography.

The Kodak Box contains everything for picture making the all-daylight way, including camera, film, daylight developing box, paper, chemicals, dry mounting tissue and mounts for the finished prints.

The camera is the No. 2 Brownie, known the world over as a good, dependable little instrument, and capable of first-class work. Daylight tank development has proven one of the triumphs in the Kodak way of picture making and is provided for in this outfit by the Brownie Developing Box.

The Brownie Developing Box is a simplification of the Kodak Tank Developer, made possible by the short length of the Brownie film, and consists of a handsome metal box of sufficient length to permit the unrolling of the film within it so the developer may act upon it.

The entire operation of development and fixing is conducted in full daylight in a manner similar to that employed with the Kodak Tank Developer, and the results are fully equal in quality. A special instruction book is furnished explaining in detail every operation and so simply written that success is sure, even in the hands of the absolutely inexperienced. The Kodak Box No. 2 contains:

1 No. 2 Brownie camera,	$2.00
1 Brownie Developing Box,	1.00
1 Roll No. 2 Brownie film, 6 Ex.,	.20
2 Brownie Developing powders,	.05
1 Pkg. Kodak Acid Fixing Powder,	.15
1 Four-oz. Graduate,	.10
1 Stirring Rod,	.05
1 No. 2 Brownie Printing Frame,	.15
1 Doz. 2¼ x 3¼ Brownie Velox,	.15
2 Eastman M. Q. Developing Tubes,	.10
3 Paper Developing Trays,	.30
1 Doz. 2¼ x 3¼ Duplex Mounts,	.05
1 Doz. Kodak Dry Mounting Tissue,	.05
1 Instruction Book,	.10
	$4.45

The price, $4.00, is no more than for an ordinary toy of but passing interest. The Kodak Box will afford

lasting pleasure to the recipient of any age, and, incidentally, is a happy solution of the ever perplexing holiday gift problem.

Eastman Kodak Company
ROCHESTER, N. Y., *The Kodak City.*

EASY PHOTOGRAPHY.

F. Dundas Todd, editor of the "*Photo Beacon*", in a series of articles in his publication under the above caption, has been endeavoring, among other things, to disabuse the mind of the amateur photographer of certain fallacies regarding exposure and development. Having long ago settled to his own satisfaction the soundness of the theory of the time and temperature method of development, he makes use of the following actual, practical demonstration as a clincher:

"A year ago a boy of fifteen for whom I am responsible used a Brownie Kodak No. 2 during his summer vacation. He made in all about one hundred exposures before one of them was developed. Before I got hold of him he had run about two dozen through the bath with very unsatisfactory results. I pinned him down to the *time and temperature method* and *from that time on he developed all right.*

From September of last year until July of this he never touched a camera. One day he was asked to photograph a group of ladies and he proceeded to borrow my No. 4 Cartridge Kodak, loading it with a roll of six exposures. He had arranged the group on the large front porch and when I came home I was informed of what had occurred. The intention was that I could develop the roll of film, but that evening I was unable to get at the work and so left it to a more convenient season. On returning from the office the following evening I found the boy had developed the roll himself.

So far there appears to be nothing unusual in what was done, but a statement of the facts is rather interesting. To avoid much measuring and weighing, the boy had been in the habit of using a rodinal developer of a certain strength for a particular time at a fixed temperature. It so happened, however, that he was short of this developer and on rummaging through my dark-room landed upon a lot of Eastman's developing powders. He immediately dissolved one of them according to instructions, brought the solution to a temperature of 65 degrees and went ahead. About two years before I had told him that the particular pyro formula I was in the habit of using took six minutes to develop and he thought that time ought to be good enough and he acted on the strength of this opinion. The negatives proved to be very good. Being somewhat curious, I asked him what stop he used and he informed me that he really did not know as he had forgotten all about the stop. An examination of the instrument showed the aperture to be F. 16. Then I inquired as to the time. He smiled very blandly and informed me that he took care to give sufficient variety by starting at one second and giving 2, 4, 6, 8 and 10 to the other five. What surprised me was the *remarkable uniformity of the results.* The negative ultimately selected to print from was chosen not for its technical excellence but because it was the one in which the members of the group appeared to look at their best.

The important feature of this experiment I want to impress upon my readers is the fact that *sufficient* exposure was given and that care was given to the *strength* of the developing bath, to its *temperature* and to the *time* the films were permitted to remain in it. These are the three important factors in developing and the boy had had them hammered into his head so frequently that he was very careful over this part of the work even if he had been a trifle careless about the factors that concerned exposure.

A great many people ask me why

it is that increased exposure within the limits of the latitude of the plate does not flatten out the gradations in the picture. The mechanics are now understood since it has been possible to make exact measurements in a scientific way, and *the result of prolonged over-exposure would appear to be only an even deposit of fog on the surface of the sensitive film, which merely buries the first impressed image, and whose effect practically is simply to prolong the time of printing.* If an over-exposed and fully developed negative be reduced the reducing bath will *first* of all attack this *surface* deposit and once it is got rid of we find practically that we have got a negative that is equal to one that was correctly exposed and properly developed."

Back up the sound theory of the time and temperature method of development with the remarkable uniformity and unequalled latitude of the Eastman N. C. film, and add to this all the convenience of the Kodak Tank Developer, and you have the ideal method of producing the highest percentage of good results. The experience is in the Tank.

ENLARGEMENTS.

Any owner of a Folding Pocket Kodak, or in fact, almost any model Kodak, has practically a complete outfit for making bromide enlargements of any size. We have just issued a new book "Bromide Enlarging with a Kodak", which explains fully how the Kodak may, by the simplest means, be converted into a practical enlarging apparatus.

In addition, the book contains explicit directions for every process of enlarging down to mounting the finished print.

The book is yours for the asking, at your dealer's or by mail.

NO CHANCE.

Have you ever stopped to consider how pitifully small the happy-go-lucky man's chances for error are with a pocket Kodak? From start to finish every time he wants to make a mistake, he is brought up with a round turn.

Take off the back of the Kodak to insert the film spool, can't put the back on again upside down or wrong end to—there is the word "Top" stamped on the back, staring him in the face.

Try to put the spool in upside down, "Top" on the spool end again points the way.

Let him start to wind off the film with the firm determination to run past No. 1—hold on, go slow, a warning hand appears at the little red window and in spite of himself, he turns slowly until No. 1 appears.

Then there is the finder right where he has *got* to look into it—absolutely no excuse for cutting off the head or feet of his subject.

Correct focus? Ah, there is where he has his opportunity—just draw out the front and take chances: But, no, here is a nice little graduated scale with various distances marked on it—looks too business-like to pass by and unconsciously he estimates the distance and adjusts the bellows accordingly.

Next day he is out for street scenes and general views—at last here *is* a chance to mix things up, but way down on the right hand side of the Kodak front is a little device with a catch for stopping the front in correct focus for various distances — yes, twenty-five feet is about right, so he sets the Automatic Focusing Lock and the "Fixed focus fixer" as an enthusiast so aptly termed it, thwarts his final endeavor to go wrong.

The film with the speed of a Seed 27—Eastman N. C.

Now Ready:

Angelo

Black and White

Platinum

ANOTHER ANGELO SUCCESS.

Grades: Smooth and Rough.

Jos. Di Nunzio Division,

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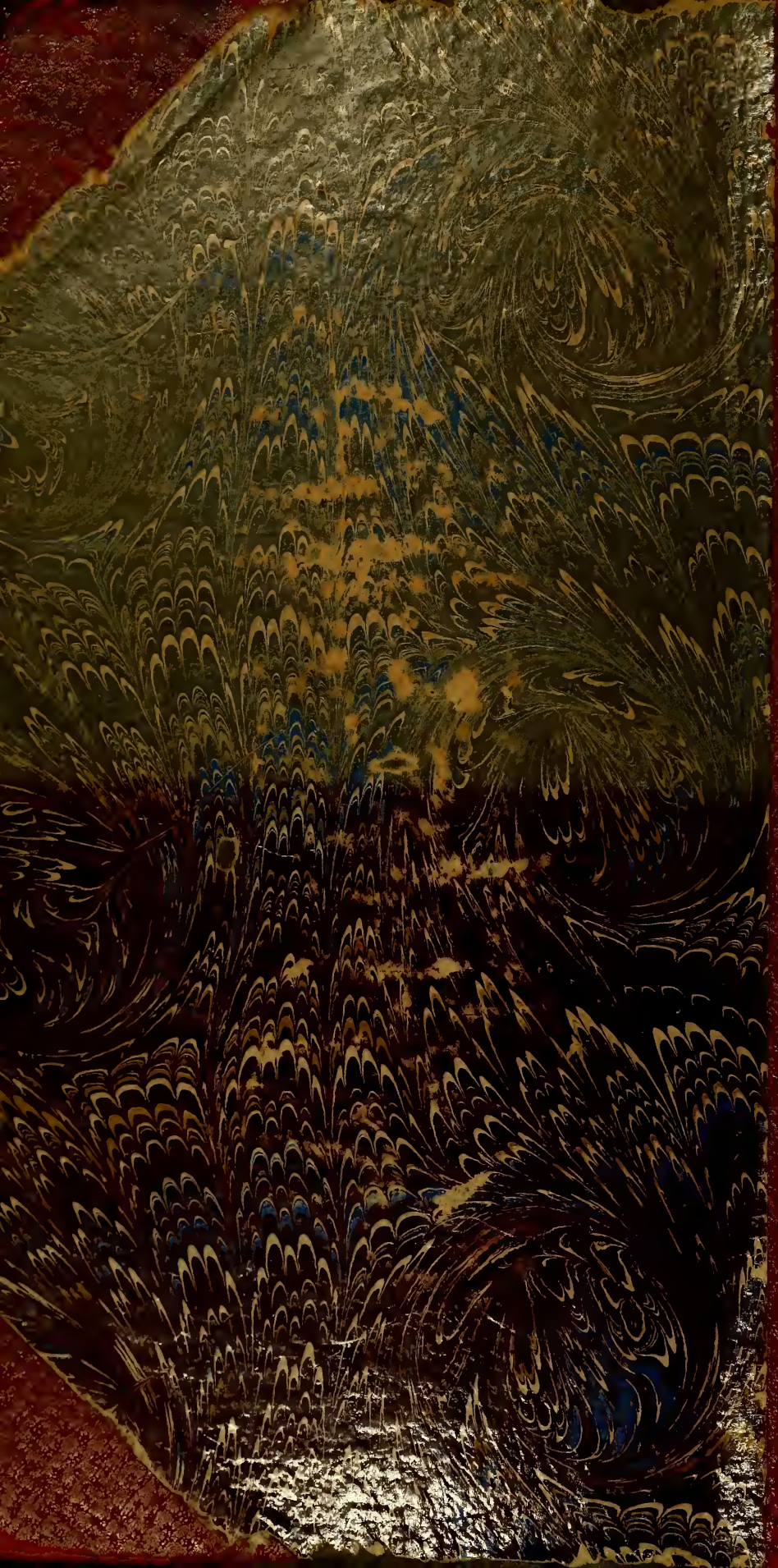
Rochester, N. Y.